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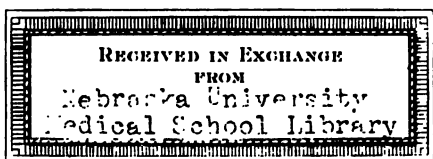
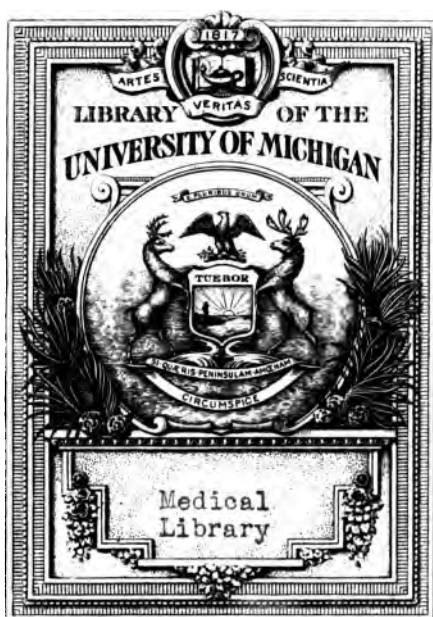
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the 1990s, the incidence of *S. flexneri* has increased in the United Kingdom [10]. In the United States, *S. flexneri* has been reported to be the most common serotype of *Shigella* isolated from children with shigellosis [11].

There is a paucity of data on the epidemiology of *S. flexneri* in the United Kingdom. In the 1980s, *S. flexneri* was the most common serotype of *Shigella* isolated from children with shigellosis in the United Kingdom [12]. In the 1990s, *S. flexneri* was the most common serotype of *Shigella* isolated from children with shigellosis in the United Kingdom [13]. In the 1990s, *S. flexneri* was the most common serotype of *Shigella* isolated from children with shigellosis in the United Kingdom [14].

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**THE**  
**DUBLIN HOSPITAL REPORTS**

**AND**  
**COMMUNICATIONS**

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## PREFACE.

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**THE** Editors of this work, encouraged by the favourable reception which the first volume has met with, both in this country and in Great Britain, have determined to prosecute their undertaking, and hope to produce a volume annually, equal in value to that which is already in the hands of the public.

The Editors, being aware that there are many practitioners in the provincial towns in Ireland, who might contribute to the general stock of medical knowledge, and who probably would have done so had there been a depository for their observations, beg to observe, that this work was set on foot not merely for their own convenience, and that of their friends in this city, but for the regular members of the Profession all over the kingdom; who are again invited to forward, to the care of the Publishers, Reports



from Hospitals, Essays on Medical and **Chirurgical** subjects, or such cases as may strengthen or controvert doubtful points of practice, or illustrate any of the obscurities in Pathology.

While the Editors solicit further assistance from their brethren, they avail themselves of the present opportunity gratefully to acknowledge the communications already received, many of which are destined for a third volume, which will appear early in the ensuing year.

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# MEDICAL REPORT

OF THE

## HARDWICKE FEVER HOSPITAL,

FOR THE YEAR ENDING ON THE 31ST MARCH, 1818,  
INCLUDING A BRIEF ACCOUNT OF AN EPIDEMIC FEVER IN  
DUBLIN.

By J. CHEYNE, M. D. &c.

" This, however, I am convinced of from numerous careful observations, that the same method which cures in the middle of the year may possibly prove destructive at the conclusion of it; and when I had once happily fallen upon a genuine method of treating any species of fever, suitably to its nature, I always proved successful, (proper regard being had to the constitution, age, and other particular circumstances of the patient) till that species became extinct, and a new one arose, when I was again doubtful how to proceed; and, notwithstanding the utmost caution, could scarce ever preserve my first patients from danger, till I had thoroughly investigated the nature of the distemper, and then I proceeded in a direct and safer way to the cure."

*Sydenham, sect. 1. ch. 2. § 3.*

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AS it is my wish to enable my successors in the Hardwicke Fever Hospital to compare future Epidemics with those which I have seen, I have followed the order of time in the observations contained in these Reports. Indeed, by this order, we are likely to obtain information of the most satisfactory kind, not merely of the nature and causes of fever, but of the treatment also; for, by confining our remarks to the existing Epidemic, we avoid one of those errors which practical men are most liable to fall into, namely, that of extending to a whole genus of fevers, rules which perhaps apply to one species only.

In the course of the year included in this Report, exclusive of the assistance which I received from some of our clinical clerks, I myself made daily reports of nearly three hundred cases of fever, and I also superintended many of the dissections which are annexed to this paper : my opportunities of observation were considerable, and I was not neglectful of them. The reader, however, is advertised, that while I have been anxious to note every thing worthy of remark, I affect to be nothing more than a reporter. I leave the higher office of arranging and systematizing to others.

The year 1817 was a very unproductive one. Although the seasons were rather more propitious to the husbandman than in 1816, the prevailing character of the weather was similar, for in both years there fell an immensity of rain, the atmosphere being cloudy and cold. In 1817 there probably fell nearly as much rain as during the corresponding months of the preceding year ; but then, although there was not much difference of atmospheric temperature, the evaporation in 1817 was considerably greater. In short, in the year 1817, as in 1816, the order of the seasons was inverted, the winters in both being remarkably mild and open, the springs ungenial, and the summers wet, cloudy and cold, and in both years there was but little employment for the poor, while at the same time provisions and fuel were scarce and of bad quality. In the three first months of 1818, particularly January and March, there was much stormy and wet weather. In March there were great

floods and inundations of low grounds, so that tillage and spring-work were at a stand.

In a Report which was published in the first volume of this work, p. 50, I have described three species of fever which I observed in the Hardwicke Hospital in the month of February. The first, the fever which had filled our wards during the preceding winter. The second, a variety of fever, of all the forms of that disease which I have as yet seen in the Hardwicke Hospital, alone corresponding with the conception I have of Typhus. There were not more than ten or a dozen cases of this species of fever, nor am I quite certain that these were really instances of Typhus. I confess that I never saw Typhus epidemic, save in the military hospitals in the South of England, where I chanced to be at the time when Sir John Moore's army landed from Corunna. Thirdly, the fever, which became the epidemic of the summer, which was remarkably prevalent all over Ireland. It is stated (p. 51) that the second kind of fever seemed gaining upon the third; a remark, which proved incorrect, into which I was betrayed, by observing the third description of fever frequently attended with petechiæ and dejection of spirits, at the same time that convalescence was tedious, and relapses more than usually frequent. This epidemic I shall now proceed to describe.

In many of the patients the fever seemed to arise from contagion, at least it was not easy, in any other



In the severe cases, about the end of the first week or beginning of the second, rarely sooner, the patients' minds became unsteady, their eyes were suffused; this symptom, at one time, was very general: in five patients of fourteen who were in No. 1. on the 16th of June, there was suffusion of the eyes; and six more had been so affected, but were recovering; then delirium took place during the night. At all times such patients were incapable of any stretch of attention; they answered questions satisfactorily, though with a faltering voice, but soon wandered from the subject. In many cases the delirium was of a very troublesome kind; first it was only occasional, then it continued all night, then it was uninterrupted. We had many patients who created great disturbance by wandering about the wards all night, prying into the closets, and looking under the beds. Some of these were full of their usual occupations; one man, by trade a cooper, endeavoured to pull his bed to pieces, in order to make a tub of the spars. In several who were habitually spirit drinkers, and who, in the commencement of their illness, by means of cordial drinks, had forced themselves to sweat, the delirium appeared very early.

The state of restless delirium above described, as belonging to the more severe cases, sooner or later degenerated into sopor, often with subsultus tendinum and inability to protrude the tongue, which very awkwardly obeyed the will of the patient: he

would open his mouth, and after various unsteady motions, at length force out his tongue, and when this was accomplished it was not again drawn within the mouth until he was repeatedly admonished to that effect; and when he attempted to lay hold of any thing, he either overshot the object, or he was short of the mark. After continuing in a soporose state, with partial intermissions for a longer or shorter time, generally for two or three days, the bowels being soluble all the while, sleep became calm and natural, with considerable intervals of waking during the day. About the period at which delirium set in, the tongue had often a dark yellow or brown stripe in the middle, the edges being clean and thinly covered with white mucus. In two or three days more it was black, shrivelled, and, as it were, dried up, the gums and lips being sordid and black from incrustrated mucus. As the soporose state went off, the blackness and dryness of the tongue went off also, leaving that organ in a more natural condition, more expanded, and again white with florid edges, and moist from a return of secretion, which was sometimes copious. The expression of the patient daily improved. The temperature gradually approached the point of health, the flushing subsided and the inflammation of the eyes, also the complexion became clearer as well as paler, and the eye more expressive. After some of the very severe cases, the pupil for a time continued dilated, and a considerable degree of the deafness, which took place about the height of the disease, remained, and the pulse fell below its natural frequency. The patient

turned upon his side, and about the end of the second week, in many cases, began to attend to external circumstances, and to call for food ; but when the fever was severe, these favourable changes did not take place before the end of the third week. The pulse, in general, was more or less frequent according to the severity or mildness of the disease ; but there were several alarming cases in which it never exceeded 80. In the evening, and early part of the night, the distress of the patient was in general greatest.

Perhaps it is scarce worth observing, that the flies in great numbers settled on the beds and faces of those patients who were most severely affected with the fever, even when they were extremely restless ; as they recovered they seemed to lose their attraction for the flies.

When delirium set in, the symptoms of pulmonic irritation often abated, and the headach also ; and when reason was restored, in some few patients, the pulmonic affection recurred. After crisis an attack of cough, difficult expectoration, and dyspnoea, occasionally retarded the patient's recovery. Amendment was oftentimes gradual, without any crisis but by stool, unless sleep could be counted critical ; and, in a few, recovery was far advanced, and the patient in the convalescent ward before free perspiration, which was often preceded by rigor, perfected the solution of the disease. In two instances, crisis in this way took place at the end of the fourth week ; hence as

relapses not unfrequently occurred, the rigor of solution was liable to be mistaken for the rigor of relapse. The urine, which was examined in a good many instances, was turbid with a furfuraceous sediment. In certain cases, however, it was transparent, with a light cloud suspended in it. In twelve or fourteen days after crisis the patients were fit to be discharged, and they generally resumed their labour before the end of the third week.

These patients who on the first or second day had very violent symptoms—great quickness of the pulse, 130 or more, great flushing and heat of the surface, much anxiety and general distress, frequently obtained a perfect crisis on the third day. Persons under twenty-five years of age had the disease mildly, while it was fatal to persons advanced in life, to those who were prone to the use of fermented liquors, and to fathers of large families, whose minds, of course, were a prey to great anxiety when they discovered that they were affected with fever.

It was remarked to me in the month of July, by Dr. Egan, that he never had seen so many instances of petechial fevers as during the summer of 1817; and my experience in the Hardwicke Hospital concurred with his. In the latter end of the summer, there were petechiæ in almost every case which extended beyond the first week. Although, at one time, the petechiæ seemed to have some connexion with the heat of the patient's body, we eventually discovered that this in fact was not so, nor had they

any relation to the temperature of the surrounding medium : they were no part of a heating regimen, for petechiæ were abundant in persons who had slept in outhouses, or in the fields, for several nights before they were taken into the hospital. Indeed however favorable, among the poor, opinion might be to the heating regimen in fever, a great many of the patients were so reduced in their circumstances, that literally they had not a blanket to cover them. In such persons petechiæ were often abundant. Petechiæ in the advanced stage of fever, which are a formidable symptom, secondary petechiæ, as they have been termed, sometimes appeared while the patients lay under only one blanket, and while every sash in the ward was let down. There was an eruption of this kind in Hanlon (No. 539), and by the way the thermometer rose only to  $95^{\circ}$  in Hanlon's month, and axilla two days before his death, and when he was covered with petechiæ. The diffused petechiæ were in general a part of a severe disease ; when the sensorium was much affected, they were seldom absent. The temperature of the body was in general high ; in the months of March, April, May, June, July and August, the temperature was ascertained in 250 cases on the day of admission, and the following was the result :

$97^{\circ}$	$98^{\circ}$	$99^{\circ}$	$100^{\circ}$	$101^{\circ}$	$102^{\circ}$	$103^{\circ}$	$104^{\circ}$	$105^{\circ}$	$106^{\circ}$	$107^{\circ}$	$108^{\circ}$	$109^{\circ}$
1	12	11	59	14	37	19	57	24	12	3	0	1

*The following Tables will show the state of the respiration and the pulse during the same period :*

**Frequency of the Respiration in 171 cases.**

20	22	24	26	28	30	32	34	36	38	40	44	48	52	56	60
9	4	27	10	27	14	40	7	12	6	12	6	1	1	1	1

**Frequency of the pulse in 237 cases.**

52	56	60	64	68	70	72	74	76	78	80	82	84
1	1	1	2	2	4	7	3	5	1	19	1	5

86	88	90	92	94	96	100	102	104	106	108	110	112
1	11	2	5	4	11	20	2	17	3	15	4	13

114	116	120	124	128	130	132	136	138	140	144	158	180
1	9	31	5	8	5	7	3	1	2	2	1	2

The following table is the result of an examination of all the cases in which the thermometer rose above 104°. In most of these cases, after the height of the fever, the temperature was gradually reduced, the thermometer falling from 105° or 106 to 100, and then crisis taking place further reduced the thermometer to 98.

List of Patients admitted from the 3d of March to the 3d of September in whom the temperature exceeded 104 degrees.

Date of Admission.	No. of days sick.	Name.	P. R.	T.	Petechiae.	Predominant Symptom.	Day of crisis.	Probable Cause.	Blood-letting.	Termination.	Remarks.
Mar. 10	8	Margt. Matthews	136	105	Dun Petechiae	Severe Cough	11th day, by diarrhoea	Cold.	V. S. Sec.	Recovery	
Mar. 11	9	Richard Mollay	130	105	Florid Petechiae	Nausea, vomiting and headache	About 14th day, by sleep	Contag.	V. S. Sec.	Do.	
Mar. 20	9	John Byrne	133	105	Florid	Apparition at chest & headache	About 14th day, by sleep	Contag.	V. S. Leeches	Do.	
Mar. 27	10	Anne Byrne	134	105	Florid	Cough and headache	About 14th day, by sleep	Contag.	V. S. Leeches	Do.	
Mar. 28	10	Blanche Byrne	136	105	Mealy Efflores.	Swelling of eyelids	About 14th day, by sleep	Contag.	V. S. Leeches	Do.	
Mar. 28	10	Pat. Russell	103	105	Dun Petechiae	Cough and headache	11th day, by stools	Contag.	V. S. Leeches	Do.	
Apr. 4	5	James Daly	10	105	Florid Petechiae	Severe headache	By stool and sleep	Contag.	V. S. Sec.	Do.	
Apr. 11	8	Eleanor Daly	110	105	Florid	Headache and delirium		Contag.	V. S. Sec.	Do.	
Apr. 14	7	Mary Murray	104	105	Florid	Dry Cough		Contag.	V. S. Sec.	Do.	
May 16	6	James Gough	104	105	Florid	Headache and delirium	14th day, stools and sleep	Contag.	V. S. Sec.	Do.	
June 21	5	J. Fitzpatrick	104	105	Petechiae	Epic. pain, cough, & flushed eyes	14th day, stools and sleep	Contag.	V. S. Sec.	Do.	
June 21	5	Eather Morris	130	105	Petechiae	Severe headache	17th day, sweat	Contag.	V. S. Sec.	Do.	
July 3	13	Eather McKenna	130	105	Petechiae	Cough and severe headache	17th day, sweat	Contag.	V. S. Sec.	Do.	
July 3	13	John Gibney	130	105	Petechiae	Epic. tend. cough & headache	17th day, sweat	Contag.	V. S. Sec.	Do.	
July 3	13	Mary Woods	104	105	Petechiae	Severe headache, flushed eyes	17th day, sweat	Contag.	V. S. Sec.	Do.	
July 3	13	Daniel Quib	100	105	Petechiae	Violent headache	7th day, sweat	Contag.	V. S. Sec.	Do.	
July 15	9	John Thomson	132	105	Petechiae	Epigastric tenderness		Contag.	V. S. Sec.	Do.	
July 23	2	Pat. Dougherty	113	105	Petechiae	Severe headache	12th day, perspiration	Contag.	V. S. Sec.	Do.	
July 23	2	Mary Jordan	130	105	Petechiae	Epigastric tenderness	12th day, perspiration	Contag.	V. S. Sec.	Do.	
Aug. 4	5	Christ. Collins	130	105	Petechiae	Severe headache	12th day, perspiration	Contag.	V. S. Sec.	Do.	
Aug. 4	5	And. Delany	108	105	Petechiae	Severe cough and headache	8th day, perspiration	Contag.	V. S. Sec.	Do.	
Aug. 4	5	Peter Roe	130	105	Petechiae	Sickness and diarrhoea	8th day, perspiration	Contag.	V. S. Sec.	Do.	
Aug. 6	6	John Brazil	140	105	Florid	Epigastric tenderness	10th day, perspiration	Contag.	V. S. Sec.	Do.	
Aug. 6	6	Thomas Connell	140	105	Florid	Severe cough and headache	10th day, sweat	Contag.	V. S. Sec.	Do.	
Aug. 7	10	Matt. Brazil	106	105	Florid	Severe cough and headache	17th day	Contag.	V. S. Sec.	Do.	
Aug. 10	5	Mary Spencer	106	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 11	5	Mary Spencer	106	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 11	5	Pat. Quinstrong	108	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 12	12	Pat. Higgins	108	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 21	10	And. Higgins	132	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 21	10	Anne Ternan	132	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 25	5	Thos. Fleming	105	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 25	5	Jud. O'Donnell	105	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 25	5	Thos. Fleming	105	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 27	11	Mary Tyrell	105	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 27	11	Michael Read	104	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 27	11	Francis Reilly	104	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 27	11	Mary Clarke	104	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 27	11	Mary Carroll	104	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	
Aug. 27	11	John M'Nulty	112	105	Florid	Severe cough and headache		Contag.	V. S. Sec.	Do.	

It appears from this table, first, That there were as many instances of excess of temperature during the month of August and first week of September, while epigastric tenderness predominated, as during the months of March, April, May, June and July, while the affection of the lungs was the predominant symptom of the early period of fever. Secondly, That when excess of temperature took place, the circulation was generally, but not always, proportionately quickened : thus in thirty-two cases of the foregoing forty, in which the pulse was counted, there were nine patients in whom it did not exceed 104, which was about the average frequency of the pulse on the day of admission during the summer. Thirdly, That respiration was even less affected during the existence of excess of temperature than the circulation: in twenty-two cases of forty, the frequency of the breathing was ascertained ; and in thirteen of these cases it did not exceed 30 in the minute, the average frequency of respiration being about 30. Fourthly, That in forty patients, in whom the temperature exceeded 104, there was only one death. In order to give this remark its proper value, it ought to be observed, that, between the third of March and the third of September, thirteen persons died of the fever in wards 1 and 4, out of two hundred and fifty, in whom the temperature was ascertained on the day of admission, and from the following statement it will appear that in a majority of these fatal cases the temperature did not exceed 100..



0	at 97°	being 0	in 1	} 7 deaths in 83 patients, or 1 in 12 nearly.
3	98°	3	12	
1	99°	1	11	
3	100°	3	59	
0	101°	0	14	} 5 in 127, or 1 in 25.
1	102°	1	37	
2	103°	2	19	
2	104°	2	57	
0	105°	0	24	} 1 in 40.
1	106°	1	12	
0	107°	0	3	
0	109°	0	1	

Although a considerable number of the patients in whom the temperature exceeded 104° were from houses which we supposed infected, yet 105°, 106°, or 107° frequently formed a symptom of a disease which was not alarming. Indeed, from the foregoing table, it would appear that excess of temperature was rather a favourable symptom. It was not uncommon to find the thermometer gradually rising from 98° or 99° to 102° or 103° or even higher; while the severity of the disease was abating, and on the other hand we frequently observed the temperature declining while the patient was getting worse; thus the patient was often in great danger when the temperature of the body did not exceed 98°. In some instances, for a day or two before death, the mercury did not rise above 96° or 95°. Indeed, in severe cases, after the temperature fell to par, or below it, and that without any critical effort, we considered its rising again as a favourable change.

Venesection sometimes lowered the temperature ; frequently it produced no change, and in several instances the thermometer rose two or three degrees after blood-letting, even when that measure greatly relieved the patient. It is clear that venesection was not contraindicated by excess of temperature alone, since, in nineteen patients of a temperature which raised the thermometer above  $104^{\circ}$ , in whom blood-letting was practised, there was no instance of death.

In examining the disordered state of the vital functions during the summer of 1817, with a view to the prognostics of continued fever, we derived more information from the state of the breathing than from the pulse, and more from the pulse than from the temperature of the body.

Among such patients as were admitted early, and were treated upon a strictly antiphlogistic plan, there were many instances of crisis on the third or fourth day, the disease appearing as a febricula, or perhaps rather as an extended ephemera ; and these specimens of mild fever occurred even among those who came from houses which afforded us instances of the disease in its worst form : the disease, however, was fatal, in a large proportion, among such as came from houses which we supposed were infected, and in these persons relapses were very frequent. On the other hand, in many who denied having had any communication with patients in fever, the disease was attended with severe symptoms, and ran the usual course. In a word, the fevers which we supposed arose from

contagion, and those which seemed to originate in intemperance, cold, fatigue, &c. in which we could discover no trace of contagion, were so shaded into each other, that it was impossible, by their symptoms, to demonstrate any difference between them.

We had many opportunities of observing that copious perspiration, in the early period of the fever, when artificially produced by warm or cordial drinks, accumulation of bed-clothes, &c. was insufficient to reduce the temperature ; the disease continued with aggravated symptoms, and apparently in consequence of this mode of treatment. In the month of August, perspiration, in the advanced period of the disease, even when not produced by any sudorific, did not always remove the disease until it had recurred several times ; and I have more than once seen the thermometer, in the axilla and mouth of a patient who was bathed in sweat, raised to 104 or 105. During the winter, in some cases which proved fatal, the patients perspired freely for several days before death, but the perspiration did not reduce the pulse, nor did the functions of the brain improve under it. In one of these fatal cases there was a very copious sediment in the urine on the day before the patient died.

In April and the beginning of May, the fever generally terminated in a lax state of the bowels and sleep, and then perspiration preceded by rigor, frequently resolved the fever. Margaret Kearney, admitted on the 6th day of May, was the first patient who obtained crisis by rigor and perspiration, which

took place on the 12th of that month, and there were twenty instances of crisis by sweat following a rigor, among fifty-nine patients admitted, in the month of May, after Kearney ; yet I have good reason to think that this form of crisis had not taken place once in several hundred patients admitted into the Hospital before Kearney. The most perfect crisis, during the summer months, consisted of three stages : First, a state of restlessness and anxiety, with flushing of the face, rapid pulse, frequent laborious breathing, and increased heat of the surface, with great distress at the pit of the stomach from heat, tenderness or pain ; which distress was not unfrequently relieved by vomiting. The patients were in a state of universal uneasiness, which would have been truly alarming had we not known its tendency ; but this state is well understood, even by the servants of a Fever Hospital, who soon come to know, by these symptoms, that the patient is near "the cool." This state sometimes lasted for the greater part of a day, during which time one of our experienced nurses, who was fond of figurative language, would generally remark that "the cool was hovering round" the patient. Secondly, a rigor or tremor, not unlike the cold fit of an ague : the patient shivered and complained of excessive cold. I never, save in two instances, was able to measure the temperature during the rigor of crisis, and in both patients the thermometer stood at 105 degrees, even while the patient was shivering and complaining of excessive cold, and anxious for an additional blanket. In one of these patients, the thermometer in the evening stood at 100, although the rigor was not

followed by sensible perspiration. Next morning the thermometer stood at 97; the tongue was clean, the pulse 88, and the patient convalescent. The rigor of crisis seldom lasts long; perhaps only a few minutes, perhaps half an hour or an hour. Thirdly, warm perspiration flowing from the whole surface of the body; this, which in general completed the salutary effort, the nurses, in the Hardwicke Hospital, call "the cool" being aware of its efficacy in reducing the heat of the body.

I may perhaps be thought tedious, but I must trespass on the reader's patience while I enumerate some other modes of crisis which took place. This is so important a part of the subject, that the history of the epidemic under review would be incomplete without it. In some patients the fever seemed to end in mucous diarrhœa; in others free expectoration took place, with relief; in one or two individuals salivation occurred as the disease was ending favourably: these patients, it is true, had taken the calomel bolus, but their gums were not tumid as in mercurial salivation. Rigor was sometimes critical, even when not followed by sweat. In some instances perspiration, with or without rigor, continuing for a short time, took place; other patients perspired for two or three days, with little or no interruption; in either case perfect crisis was generally the consequence. But the effort at crisis by perspiration was not always effectual till it was repeated several times on successive days, or successive critical days. In the middle of August this was especially observable; several per-

sons perspired freely without relief, and without abatement of febrile heat. In a patient in No. 4, the temperature was  $105^{\circ}$ , while she was in a general and profuse sweat. Epistaxis, in one or two instances, mitigated the severity of the disease; but I do not recollect any instance in which it afforded complete relief. While on the subject of imperfect crisis, I have to observe, that an individual (M. Farrell) was, on the 9th day of his fever, in a state of great debility, with involuntary stools, great dejection of spirits, shedding of tears, despairing of recovery; in the course of the night there took place an eruption of florid papulæ, interspersed with vermillion stigmata; next day (the 10th day of fever) he was relieved; he slept much, and in the evening of the 11th he had a rigor followed by perspiration, which proved critical. One patient had a rigor on the 14th day, not followed by perspiration nor complete relief; but, on the 17th day, complete relief took place without rigor or perspiration: on that day, however, the urine was turbid, and threw down a furfuraceous sediment. Rigor and perspiration sometimes took place on one critical day, and tormina and mucous bloody stools on the next. In Mary Gibney, continued sleep took place on the 21st day, perspiration on the 24th, and suppuration of the ear, followed by perfect relief on the 27th. Finally, in many cases, I could not discover any critical effort, the disease gradually terminated, as some of the older authors have remarked, by "insensible resolution."

Relapses did not take place in more than one case

in thirty, unless we consider as of the nature relapses, inflammations of the lungs, or of the mucous membrane of the intestines, both of which sometimes occurred after crisis.

The fever sometimes attacked an individual in whom organic disease had previously existed, in which case considerable irregularity was observable. In two patients who had laboured under disease of the heart, the fever was attended with dyspnoea, distressing cough, pains in the region of the heart, great general debility. In one of these patients the pulse was so irregular and unequal that it could not be counted; while in the other, the pulsation of the heart was strong, might be felt in any part of the left side of the chest, and might be seen in the epigastrium, and the cough was attended with bloody expectoration. When the disease occurred in those who had previously laboured under pulmonic complaints, the flushing of the countenance was circumscribed, the voice was sepulchral, the fever seemed hectic without perspirations or remissions. When it attacked a person who had laboured under dysentery, mucous or bloody stools appeared during its progress, along with rapid emaciation and a pale rakish look. In one patient, in whose body we discovered a liver beset with brown tubercles, the fever at an early period became icteroid; and here I would observe, that many instances of fever, which physicians of the school of Pinel would call atactic, have appeared to me to depend on some peculiarity in the constitution of the patient. I am persuaded that the

chief irregularities which we observed, during the present epidemic, were owing to the diathesis of the individuals in whom they occurred. In some women there were striking symptoms of hysteria; in one or two atrabilious persons the disease set in like an attack of melancholia. In the sanguine it wore the semblance of Pneumonia or Phrenitis, and in drunkards that of Delirium tremens. The disease was essentially the same species of fever which was prevalent at the period that these anomalies were remarked, and required only time for its full development. I shall illustrate the foregoing remarks by relating some cases of the fever attended in the beginning with anomalous symptoms.

I. In the months of April and May, in two females, hysterical symptoms, for a time, masked the true nature of the fever. One of these patients, a servant in a respectable family, was visited by an eminent physician, who at first thought she laboured under hysteria. On the 5th day of her illness he was requested to visit her a second time, to sanction her removal to a public lunatic asylum, but the disease had developed itself, and he ordered a purgative for her, and desired that she should be sent in the morning to the Hardwicke Fever Hospital. She was brought into my ward on the 25th of April. During the preceding night, she had passed many loose stools involuntarily. She was no longer capable of explaining her situation. Her eyes were suffused, their motions being languid, and she was covered with florid petechiæ. Temp. 104, P. 144, Resp. 36.



(head shaved and sponged, temporal artery opened, legs fomented.)—On the 26th her respiration was wheezing and laborious by paroxysms ; no stool—(calomel bolus, blisters to the legs.)—On the 27th, less suffusion of the eyes, extreme debility (wine, carbonate of ammonia.) She died on the 28th, being the 9th day of her illness.

The 2d patient I first saw in her own lodging on the 2d of May. She was then in a maniacal paroxysm, babbling with great rapidity of utterance :—her expression was that of suspicion and alarm,—her pulse was very rapid, and her skin moist. I was told that, along with febrile symptoms of two or three days duration, she had complained, on the 31st of March, of some uneasiness in her throat, which I was inclined to think was hysterical rather than inflammatory ; for this she was let blood. Next day her skin was covered with *pétéchiæ*, and she laboured under what appeared to be hysteria, with considerable aberration of mind. I could not have admitted this woman into my wards, without subjecting the other patients to serious disturbance, so violent was her delirium. Her legs were fomented, and a draught, consisting of camphor mixture, and camphorated tincture of opium was administered, after which she went to sleep, and awoke calm and coherent, and next day I ordered her to be removed into one of my wards. On the 4th and 5th she lay in a state of stupor ;—supine ; her pulse upwards of 120—her countenance flushed, passing stools under her in the bed. On the 6th, 7th and 8th, she was delirious in the morning—wandering about the ward ; and in a state of sopor in the even-

ing. On the 11th day of her sickness she fell into natural sleep, and from that period her illness gradually abated, her belly being loose. The medicines she used were moderate opiates with camphor, blisters, fomentations to the feet, and cold applications to the head, and mild purgatives. During her illness two of her children were admitted into my wards with petechial fevers.

II. A patient, of a strongly marked melancholic temperament who was admitted on the 5th of May, had attempted to cut his throat during the horrors of a fit of insanity, with which he was affected in the early part of his fever. On his admission he was inaccessible to every intreaty which was used to induce him to show us his tongue, or to take medicines; he lay in a state of sullen indifference for two or three days, with flushed and dusky complexion, from which state he gradually recovered about the end of the 2d week of his illness, without any evident critical effort but a loose belly with sleep. Arteriotomy was twice practised, and leeches were applied—Calomel in pretty large doses was given, followed by turpentine glysters. About the 16th day of his illness, wine was ordered. He recovered his strength very slowly.

III. On the 24th of February William Brennan, æt. 25, was admitted into the hospital in petechial fever, with cough and expectoration of mucus tinged with blood.—Crisis on the 14th day. On the 2d of April, And. Tallan, æt. 25, was admitted on the 6th

day of petechial fever, with oppression of the chest, dry cough and delirium.—Crisis at the end of the 3d week. On the 24th April, Robert Short, æt. 22, was admitted on the 6th day of fever. These were three of four young men, draymen, who slept in the same room; the fourth was conveyed in fever to another hospital in the month of March, and his comrades related of him, that during the fever, he was seized with a fit, which ended in apparent death, and removal to the dead room of the hospital, in the early part of the night, and that the porter who conveyed him thither, in going his rounds in the morning, was dismayed not a little at finding the supposed corpse seated on his breech in a corner, wildly staring him in the face as he entered the apartment. Short was a man of a sanguine temperament and gigantic height and strength, who, when he was admitted into the hospital, was in great agony with a stitch under the left nipple. He had an anxious, flushed, swollen countenance, with general soreness of the muscles of the chest from incessant coughing. (Temperature 104°.) Before his admission, probably by means of warm cordial drinks, he had three or four times forced himself to perspire. Although I have long been accustomed to witness all kinds of misery, yet I could not help being moved with the agony of this young man's look when I was leaving his bedside, and his impatience of suffering, as he rose up in bed to demand if nothing were to be done for the immediate relief of his chest. As his tongue was coated with yellowish mucus, a calomel bolus was prescribed, and a purgative mixture, and he was let blood with-

out delay. The crassamentum was covered with a thick layer of size. In the course of the night he became delirious, wandered about the ward, and sought to make his escape. Next morning I found him sitting up, gay and jocose—incoherent—but making many humorous remarks with a comic expression of countenance. I ventured, however, to make an unfavourable prognostic to one of my colleagues, as I was requesting his assistance. For, although the patient did not cough nor complain of his side, his respiration, from being only 24, had increased to 40 in the minute; his pulse was 140, and there was a greasy moisture of his skin, and some tremor of his hands; and I could not be ignorant of the danger which, in febrile diseases, belongs to sudden cessation of distress in the lungs, while at the same time disease takes possession of the brain. We ordered the temporal artery to be opened, and directed medicine for him, but in vain; no sooner did he taste any thing medicinal than he spurted it from his mouth, and he would not submit to be bled. About eight o'clock the apothecary gave him 25 drops of laudanum in a little milk, which was the last and only thing he would swallow. He became so troublesome by his continued efforts to leave the hospital, that I was obliged, when I saw him in the evening, to have beadles from the House of Industry to restrain him. About midnight he was seized with convulsions, and shortly after he died. On DISSECTION the vessels of the scalp bled very freely. The pia mater, considerably inflamed, was, in many parts, of a bright red colour; the inflammation was most extensive on

the inferior surface of the brain. The texture of the brain was remarkably firm, and on being divided, it was plain that vessels contained blood which do not usually contain it. There was no fluid in the ventricles. The entire pleura of the left side was coated with a thick covering of coagulable lymph. The vascularity of the lung was much increased, its concave surface was closely adherent to the left side of the pericardium by a thick layer of coagulable lymph; the inflammation had extended to the serous layer of the pericardium, which was of a pale rose colour. There was no fluid in the pericardium. A very large quantity of reddish sero-purulent fluid was contained in the left side of the thorax. The liver, &c. was sound.

I shall conclude the descriptive part of the subject by adverting to two cases which are well deserving of attention, illustrative of accidents which are apt to occur in a Fever Hospital; and which when the fever is petechial and typhoid, the physician ought to guard against with unceasing care. The first of these cases impeaches my own vigilance, but it is not, on that account, to be kept back. The second has been a very rare occurrence in our hospital. Several years before I was appointed a physician to the House of Industry, while remarking to Mr. Todd, one of the surgeons to that Institution, a state of discipline in the Hardwicke Hospital, highly creditable to the physicians my predecessors, I learned that gangrenous backs and legs scarce ever were known in that building. This exemption Mr. Todd ascribed to the

large wards, excellent ventilation of the hospital, and unceasing attention which was paid to the sick.

I. On the 8th of June a patient was admitted from another hospital, in which he had lain for two months, under surgical treatment, for concussion of the brain. His mind was in a state of the utmost confusion, he had lost all distinct perception of the relations of things ; and it was to be feared that he would become idiotic, for he was getting daily worse, when symptoms of general fever took place. On the 10th day of his fever he became a patient of mine. He was incoherent, his tongue was covered with a thick layer of white mucus, the edges being of a flesh red ; he was flushed, and there was a marbling on his skin like fading petechiæ ; he had a loose cough, and though his pulse was quick, the temperature of his body was not high. Leeches and cold applications to the head, fomentations to the legs, and a blister to the nucha, were applied, and mild mercurials with ipecacuanha were given. On the 14th of June he was quite unmanageable, from the disturbed state of his mind, and he was much flushed. About this time he passed his urine and stools in bed. In this condition he continued until the 20th, becoming weaker daily. He had become refractory, had refused to allow the temporal artery to be opened, or to take medicine ; and I must admit that sufficient attention was not paid to his case, which appeared to be nearly hopeless. On the evening of the 20th, some inflammation was covered by the nurse in the right side of the

Next day I discovered a considerable extent of inflammation in the right iliac region, which crepitating under the fingers, resembled a large anthrax; a point of inflammation was also observable in the upper part of the left groin; this led to an examination of the scrotum, the lower part of which was in a state of slough to the extent of half-a-crown. These appearances but too plainly belonged to an extensive urinary abscess, which had arisen probably from an overdistended bladder. The further progress of this case need not be detailed. The patient died on the 27th of June, in a miserable way; for no sooner was a dressing applied than he tore it off. Indeed he was consistent in no part of his conduct but in his efforts to baffle every endeavour which was made to save his life.

For an occurrence such as this, the physician and not the nurse is accountable. It is a rule, not to be dispensed with, when involuntary discharges of urine take place in the advanced stages of fevers, frequently to examine over the pubes, so that the catheter may be introduced when any fullness is detected in the hypogastric region. Had this rule been adhered to in the present instance, the termination of the case would have been different. In a patient who, on the 4th of August, was reported by the nurse to have voided her urine freely, only a short time before the visit, I judged it necessary, from observing urine distilling from the mattress, to examine the hypogastric region; and finding fullness and tension over the pubes, I ordered the catheter to be introduced, by

means of which at least three pints of high coloured urine were discharged, to the immediate relief of the patient. This patient required the occasional introduction of the catheter for two or three days.

II. Anne Kelly, admitted on the 13th of May. This girl had been sitting up in an hospital every night for several weeks, watching her father, whose leg had been amputated. During the day she had made great exertions to sustain two infant children who had been left to her care. Exhausted and depressed, she fell a victim to fever, the principal symptoms of which were foul taste, sickness at stomach, oppression of the breathing, and coldness of the extremities. On the 16th day of her illness she was affected with great pain of the right knee, leg, and foot; on the 17th day she was received into the hospital; the pain was severe, and was much aggravated by the slightest touch; the limb, from the knee downward, felt cold and benumbed. It was mottled from numerous minute dots of a dark blue colour, and patches of a livid blue; the middle of the leg was redder than the rest, the foot cold and very pale, like that of a cadaver. Several hard tumors were distinguishable on the calf and middle of the leg, which were very painful; the pulse was quick, but the tongue was moist and clean. In a day or two the foot became of an uniform purple colour, then of a deep fiery red, with vesications all over. She was removed on the 22d to the Richmond Surgical Hospital, in which her leg was amputated by Mr. Carnichael, after which her recovery was rapid.



In this young woman's case the inflammation of the extremity, which ended in dry gangrene, seemed to carry off the fever. When she entered the hospital neither her tongue nor her expression indicated the existence of idiopathic fever.

With regard to the morbid appearances discovered in our dissections, during the first five or six months included in this report, a very few observations will suffice. That the abdominal viscera should apparently prove sound, in most instances, excited no surprise, as, until the middle of August, there were no symptoms which indicated acute disease in that part of the system, but we expected, from the prevalence of pulmonic irritation, to find the lungs inflamed, which was by no means the case. It is not improbable, if the patients who died had perished in an earlier stage of the fever, that these appearances would not have been wanting. Our expectations were never disappointed as to the state of the brain, unless that the diseased appearances in that organ were not always proportionate to the severity of the symptoms which denoted cerebral disturbance. The vessels of the head were turgid; there was increased vascularity in the brain, especially on its surface. A slight extravasation of blood from the vessels of the pia mater was observable in many instances; in others, there was serous effusion on the surface of the brain, into the ventricles, and into the theca vertebrarum, but not to a great extent. In a few cases the remains of disease were inconsiderable; thus, in a dissection which was made of a patient of Dr.

Clarke's, who had been affected with universal agitation, extreme torpor of the bowels, petechiæ, obstinate averseness to medicine, subsultus, and rigor before death, although there was considerable flow of blood from the vessels of the scalp, and turgescence of the sinuses; the only striking appearance of disease, within the cranium, was a general blush over the pia mater at the base of the brain, as if the minute arteries had been in an excited state. In this case, however, there was, what rarely appeared during the summer, a diseased condition of the mucous membrane of the stomach.

I shall explain the treatment of this species of fever very shortly, there being much less novelty in it than in the fever of the preceding winter. Although many respectable physicians considered the disease typhus, I believe it was only the common continued fever, which generally prevails, more or less, during the summer, in many of the great towns in these countries: it was sometimes in an aggravated form, but generally it was mild. With the exception of the atactic cases, which were not numerous, the indications were obvious, and the remedies such as are in general use.

During the first ten or twelve days, the treatment was strictly antiphlogistic. In the cases which terminated before the end of the second week, it was generally antiphlogistic throughout; first the bowels were thoroughly purged, and then, in all the milder

cases, the disease was left to cold water or whey, cool air, and sponging the head and neck and chest with vinegar and water, together with a purgative when there was not more than one stool in the day. In the more protracted cases, the cordial plan of treatment gradually took place of the antiphlogistic; provided there was no inflammatory determination, from four to eight ounces of port wine were allowed daily; from the latter quantity, every advantage which seemed attainable from wine, was procured. About the 11th or 12th day, provided the cough was subdued, or had become moist, and there was no head-ach or great flushing, and no tension or tenderness of the epigastrium, I generally ordered wine on the patient's complaining of weakness, or on debility being evidenced in the position of the patient, languor of the circulation, or on the appearance of symptoms which indicate irregularity in the supply of the nervous power, as muttering, low delirium, tremors, subsultus, floccitation, &c., or on the tongue becoming shrivelled, dry, and black. Along with wine the calomel bolus was given, generally every second day.

There was another condition of the disease, in which a moderate quantity of wine was allowed. When between the second and third week of the fever the patient's appearance was nearly natural, save that his complexion was high, his tongue nearly clean, only perhaps too florid, and when with these symptoms the heat of the surface was great, and the complaint of weakness considerable; in such a state, wine was often very useful, to which were added saline

diaphoretics, an occasional purgative, and fomentations to the lower extremities.

In the advanced period of the fever, when there was no local pain, or fullness of the hypochondria, and more especially when the tongue was moist, even when it was not clean, there were some cases, in which opium, combined with mild purgatives,\* appeared to me of more use than even wine; such a combination was very useful in the cases which were attended with the less vehement kind of delirium, with pale sunken features, with tremors and subsultus, and with atactic symptoms; and here I may remark, that in the upper ranks of life, in the advanced period of fevers, attended with vigilance, but without great reaction, when the delirium is not phrenitic, but rather of a low and desponding cast, when the pulse is unsteady, while at the same time the hypochondria are not tumid, a draught containing twenty or twenty-five drops of laudanum taken at bedtime, will sometimes produce a favourable change in the whole character of the disease.

In offering a few observations on blood-letting, it is necessary that I should begin by correcting an error into which I have fallen in my first report. I have there said, that in two or three cases in which venesection was performed during the *exacerbatio critica*, the

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\* *R. Misturæ sennæ cum camphora ℥vi Tincturæ opii camphoratæ ℥iii m. sig. sumat ℥i Siis vel 4tis horis.*

salutary effort of the constitution was interrupted, and the fever went on for several days longer : the term *exacerbatio critica* ought, in strict propriety, to be confined to the struggle, which is apparent before the rigor or sweat takes place, in which case venesection is not always injurious, for in several instances, mistaking the purport of the symptoms which constituted the *exacerbatio critica*, I ordered the patient to be let blood, and perspiration and perfect crisis followed the operation : had I been fully aware of the nature of the struggle in these cases, I would have left the disease to its course ; nevertheless it is certain, that blood-letting in the first period of crisis was not in any instance injurious : the bleeding, alluded to in my first report, which interrupted the salutary effort of the constitution, was performed in the second or third period. The effect of blood-letting in the first stage of crisis may be considered as analogous to that produced by blood-letting in the hot stage of remittent fever, a practice which was common fifty or sixty years ago, to procure a more speedy and complete remission.

In April, May, June, July and August, of about three hundred patients admitted into No. 1 and No. 4, one hundred and forty nine were let blood, some of these three or four times. Of these, immediate relief after blood-letting was experienced by 94, but I am convinced that a much greater number were in an improved state on the day after they were bled ; yet the blood drawn was not sized in one case of twenty, if we except the relapses, and those cases

in which blood was drawn to relieve the inflammatory affections which were apt to occur during convalescence.

Symptoms which induced me to order venesection in 1816, directed me to that remedy in 1817: a marked increase of vascular activity in any of the viscera always led me to order blood-letting, such as severe headach, in which case the temporal artery was in general opened; pain in the chest, dry cough, and expectoration of bloody mucus, epigastric tension and tenderness; the last symptom, however, was rare, until towards the latter end of August, when it began to predominate. Bleeding did not appear to me injurious in any one instance in which it was performed in my wards. Blood-letting was several times employed as a part of the euthanasia, when perhaps it shortened the patient's life by a few hours, but even of this I am by no means certain. Of the ninety four patients, above mentioned, who were let blood with advantage, sixty nine had symptoms of pulmonic irritation, and almost every one of these had headach also; fifteen were without pulmonic disturbance, but had severe headach with flushed eyes, and, most of them, a tendency to delirium; and three had either epigastric tenderness or tormina and tenesmus. Nearly three fourths of the patients admitted had pneumonic symptoms. Headach was nearly universal. The pneumonic symptoms, however, bore a less proportion to the cephalitic as the season advanced; of the last eighteen patients admitted in June, nine were without pulmonic distress.

In some individuals the pulmonic affection was so obstinate as to require the lancet three or four times before the pain, with oppression of breathing, was subdued, or the expectoration was restored. For cough alone I did not order blood-letting, unless it was very harassing and dry, or attended with frequent breathing and bloody mucus : when there was a stitch and impeded respiration, I always used the lancet. In delirium I did not order blood-letting, unless it was attended with headach or great flushing. Upon a careful review of the cases, I find blood-letting ordered in only one or two instances, for flushing and great heat of surface, unconnected with headach, irritation of the lungs, or, in short, organic determination.

Although a preference was due to arteriotomy, yet the application of eight or nine leeches to the temple, in the early part of the fever, often succeeded completely in relieving the headach : nay, in some instances it appeared to carry off the fever in the course of the ensuing twenty-four hours. I wish to record this observation, as it has been asserted by a person in this city, of skill and experience, that leeches applied to the temple were of no use. I can affirm, moreover, that several patients have assured me that leeches applied to one of the temples relieved the side of the head to which they were applied, while the other continued to ache.

I shall not presume to say, that a greater mortality would have taken place, had I been less partial to the

lancet. The disease was in general so mild, that the mortality would have been inconsiderable under any method of treatment ; but I am persuaded that blood-letting was a means of materially abating the sufferings of the sick, by removing pain, sickness and anxiety, and by abridging the period of the fever. The use of the lancet also protected many of the patients from the usual sequelæ of fever. The number of instances in which crisis took place on the evening of the day on which venesection was performed, during the months of April, May, June, July and August, was very considerable. Several women were admitted in an advanced period of pregnancy, the sixth or seventh month, with fever in a very severe form. In these women the lancet was used when it appeared to be wanted, and mild purgatives were given daily and they did not abort, although there was every reason to dread that event in two of them in particular.

Blisters were used both in the earlier and later periods of fever. First, following arteriotomy, a blister to the nucha was found to lessen the distressing head-ach which so often occurred in the first week ; after venesection, a blister to some of the regions of the thorax was in general ordered to assist in abating pulmonic inflammation or congestion ; and after the application of leeches to the epigastrium, a blister was applied when the tension or tenderness of that part was not removed. Secondly, blisters were applied between the shoulders, to the sternum, and to the legs, in aid of cordials, to rouse the patient from the



torpor of the more advanced period of the fever, and relieve the internal organs by a powerful counter-irritation. In desperate cases of coma, the whole scalp was covered with a blister, and sometimes with apparent benefit.

A fever, such as I have attempted to describe in the foregoing pages was, during the summer of 1817, gradually establishing itself all over Ireland, and ultimately it spread among the poor in the capital. This fever appeared to be unconnected with any peculiar condition of the atmosphere, the summer having been wet and cold, and wet and cold summers, as I have observed, on a former occasion, being counted healthy ones in Dublin.\* The following is an abstract of the weather from April to September, which I owe to my friend, Mr. C. Moore.

	Prevailing wind.	TEMPERATURE.			Quantity of rain in inches.	Description of Weather.
		Highest.	Lowest.	Medium.		
April to 9th May	N. E.	65	37	51	6	Dry & clear.
10th May to 20th June	S.	66	41	54	33	Frequent rain.
10 last days of June	Var.	74	58	65	4	Very hot.
July and August	S. W.	74	51	61	39	Very wet.

\* See Dublin Hospital Reports, vol. 1, p. 14. See also Dr. Edward Percival's masterly account of the *Epidemic Fevers of Dublin*. In that paper Dr. Percival says, "it has long been remarked, that protracted dry weather is peculiarly productive of fever in Dublin, and that rainy weather, which is the prevalent character of the climate, agrees best with the general health of its inhabitants." Vide Transactions of the Association of the King and Queen's College of Physicians, p. 261. vol. 1.

The progress of the epidemic in Dublin will appear from the following slight sketch of our proceedings at the House of Industry.

On the 31st of May, and the four succeeding days, we had an average of nine admissions daily, into the Hardwicke Hospital, which was more than double the average of admissions of the five or six months preceding ; after the first week in June, the admissions did not exceed four per diem, or in other words, not more than four applied for admission, for of late it has been a rule of the institution, sanctioned by Government, that no patient in fever shall be refused admission.

On the 1st of September fifteen patients applied for admission, a circumstance which, as accounts had been received from all parts of Ireland of the prevalence of fever, the Governors of the House of Industry thought it their duty to report without delay to the Lord Lieutenant. This precaution was not an unnecessary one, for, in the course of a week, one hundred patients were admitted, the usual weekly average being twenty-seven.

On the 3d of September, apprehensions being entertained of the extension of fever, the Governors of the House of Industry were ordered by the Lord Lieutenant to apply the Whitworth Hospital, originally designed for chronic diseases, to the accommodation of patients labouring under fever ; and on the

9th of September, they received instructions from the Chief Secretary of State to extend their inquiries into all those parts of the city wherein fever had appeared, or wherein, from the neglect of cleanliness, and the density of the population, its appearance might be apprehended ; and they were at the same time instructed to order the whitewashing of the rooms of the infected, and the removal of filth from the habitations of such as were unable to remove it at their own cost, and also to adopt any other measures which might seem to them best calculated to discourage the introduction or check the progress of fever. In furtherance of these ends they were promised every assistance which the Police Magistrates and the Commissioners of Paving could afford.

In consequence of these instructions, the Governors of the House of Industry, with the assistance of Dr. Perceval and the physicians to their own Institution, digested a plan for the protection of the city, of which the following is a brief outline.

They divided the city and its environs into districts, over each of which they placed a Medical Inspector. These inspectors were ordered to ascertain the extent of fever in their respective districts, to encourage the infected to take advantage of the Fever Hospitals, to detect nuisances which were likely to be prejudicial to the public health, and to point out such houses or rooms as required whitewashing. The Medical Inspectors were further directed to make daily reports to the Governors and Physicians.

Every apartment in Dublin and its immediate neighbourhood which supplied the Hospital with a patient in fever, was whitewashed, and the areas, courts and lanes, in which masses of filth had been allowed to accumulate, were cleansed. For a considerable time there were two hundred persons in separate gangs, employed by the Governors of the House of Industry in cleansing the city, and in removing from those parts of it, which were not under cognizance of the Paving Board, the accumulated filth of years. The Liberties of Dublin, at the time these operations commenced, contained, in the private courts or areas behind the houses, innumerable depots of putrid animal and vegetable matter, which had apparently produced no very injurious effect upon the health of the inhabitants: it is certain that the Liberties yielded us very few cases of fever during the summer of 1817.

As it appeared that a fever had existed in the villages in the neighbourhood of Dublin for some time before it began to spread in the city, an inspection was ordered of the vicinity of Dublin, and a health return was made out, of which the following is a copy :

Districts.	Inspector or Informant.	Date of Inspection.	State of Health.	Remarks.
Bray,	Mr. Heffernan, Surgeon to the Dispensary, Bray.	Septem. 13	Fever more prevalent than usual.	There are seven cases of fever under the care of Mr. Heffernan; they are mild.
In Dunleary, Sillorgan, Newton Park, Gallop-green, Killmacud road, Seven houses, Ball's-bridge, Sandymount, & Ringsend,	Examined by Drs. Peetles and Murray, Medical Inspectors,	Septem. 15	Sixteen cases of fever were discovered, and thirty convalescents. Four from these districts were in hospital, and two had lately died.	Ten houses, from which patients in fever had been removed, required whitewashing—See Inspector's Report.
Among the Dublin mountains above Stepaside, and about Killybeggin, Kilgerman, & Sandyford,	Dr. Burke, Physician to Dispensary, Dundrum.	Septem. 12	Fever has nearly subsided.	Hardly a cabin escaped, so prevalent had fever been during the early part of the year.
Rathfriland, Lucan, Leislip,	Mr. Murray,	Septem. 16	Three persons in fever.	Whitewashing the town at the expense of the gentry. These were all medical men, Mr. Ferguson, Mr. O'Reilly, and Mr. Goodahaw.
Clonsilla, Newbridge, Castle-town, Callbridge, Dunboyne, Carton,	Mr. Johnson and Mr. McDowell, Medical Inspectors,	Septem. 12	Two persons in fever. Three do. do. Two do. do. Eighteen do. do.—9 convales. Twelve do. do.—9 convales. Two do. do. Three do. do. Four do. do. One family affected in each of these villages.	Two persons were in Dublin in hospital from these places.
Finglas, St. Margaret's, Swords, Kilsela, Carduff, Macgillstown, Baldoyle, and Dunabate.	Mr. Johnson, Do. Messrs. Macdowell, and Johnson, Physicians to the House of Industry,	Septem. 15 Septem. 13	During which period 199 persons have been received into the Fever Hosp. of the House of Ind. from Dublin and neighbouring villages.	The apothecary was in fever—2 persons in Church-lane, Callbridge, had died within the last two or three weeks. Two fatal cases lately occurred in Dunboyne.
Dublin,		Sept. 1, to Septem. 13		One of these in the Harl. Hosp.—the village healthy. One of these sent to Hardwicke Hos. and there died. Four had been sent from Swords into Hardwicke Hosp a fortnight ago; in these places the disease was very mild.
				The average per week from 1st of last Jan. to the 1st of Sept. has been 27. The fevers are many of them severe, but attended with no particular malignancy. The Liberties unusually exempt from fever.
	Physicians to Cork-street-Hospital,	Septem. 9	Epidemic of the county does not extend to the city of Dublin—Printed Report.	Sept 17, 1817.
				WILLIAM ABBOTT, Med. Clerk.

**WILLIAM ABBOTT,**  
Med. Clerk.

Notwithstanding the measures of medical Police, which were adopted, the fever continued to extend; and as the House of Recovery in Cork-street was full, as well as the Hardwicke and Whitworth Hospitals, several unoccupied wards in Steevens's Hospital were opened, at the desire of the Lord Lieutenant. When these wards were filled, his Excellency directed the Richmond General Penitentiary to be converted into a temporary Fever Hospital. He also directed patients in fever to be sent to Sir Patrick Dun's Hospital; finally, the City Bridewell, which was capable of containing four hundred sick, was ready to be converted into an hospital should the epidemic further increase; and such was the provident care of Government, that with the exception of one day, every person in fever, who applied to be taken into an hospital, was received during the autumn, winter, spring, and summer of 1817 and 1818.

Knowing that Doctor Renny, Director General of Military Hospitals, had paid much attention to the state of the public health, I applied to him for information with respect to the extent of hospital accommodation afforded by Government, and to his kindness I am indebted for the following interesting table:

**Fever Hospitals attached to the House of Industry.**

First three months.		Second three months.		Third three months.	
In hospital 1st September, 1917	921	In hospital 1st December, 1917	1898	In hospital 1st March, 1918	2127
Admissions from 1st Sept. to 30th Nov.	527	Admissions from 1st Dec. to 28th Feb.	355	Admissions from 1st March to 31st May	567
Discharged cured	920	Discharged cured	1761	Discharged cured	9321
Died	79	Died	184	Died	139
In hospital 30th Nov.	296	In hospital, 28th Feb.	870	In hospital 31st May	514
Proportion between the admissions and deaths one in fifteen nearly.	—	Proportion between the admissions and deaths one in twelve.	—	Proportion between the admissions and deaths somewhat below one in twenty.	—
Admissions from 18th Sept. 1917 to 30th Nov.	333	Admissions from 1st Dec. to 28th Feb.	548	Admissions from 1st March to 31st May	848
Discharged cured	925	Discharged cured	633	Discharged cured	522
Died	43	Died	15	Died	78
In hospital, 30th Nov.	85	In hospital 28th February	82	In hospital 31st May	78
Proportion between the admissions and deaths one in twelve nearly.	—	Proportion between the admissions and deaths one in thirty-six and an half.	—	Proportion between the admissions and deaths somewhat below one in 46.	—
Admissions from 14th Sept. to 30th November	1191	Admissions from 1st Dec. to 28th Feb.	1543	Admissions from 1st March to 31st May	2716
Discharged cured	1030	Discharged cured	1445	Discharged cured	1690
Died	66	Died	99	Died	61
In hospital 30th Nov.	296	In hospital, 28th Feb.	869	In hospital 31st May	948
Proportion between the admissions and deaths somewhat below one in twenty.	—	Proportion between the admissions and deaths one in eighteen.	—	Proportion between the admissions and deaths somewhat below one in 28.	—

# SIR PATRICK DUN'S HOSPITAL.

Admissions from 19th Feb. 1818, the day of opening the Fever Ward, to 28th following	-	95
Ditto from 1st March to 31st May	-	317
Discharged cured	-	385
Died	-	19
In hospital 31st May	-	8
Proportion between the admissions and deaths somewhat below one in twenty-one.	-	412

# WHITWORTH HOSPITAL, on the Banks of the Royal Canal, near Drumcondra.

Admissions from 25th May, 1818, the day of opening the Hospital for the reception of patients, to 31st following	-	13
Discharged cured	-	3
In hospital 31st May	-	10
No Deaths.	-	18

## RECAPITULATION.

First Period—Total of admissions during three months, ended 30th Nov. 1817	-	-	-	2753
Total Number of deaths in ditto	-	-	-	168
Mortality somewhat below one in sixteen.	-	-	-	
Second Period—Total of admissions during three months, ended 28th February, 1818	-	-	-	4344*
Total number of deaths in ditto	-	-	-	288
Mortality somewhat below one in fifteen.	-	-	-	
Third Period—Total of admissions during three months, ended 31st May, 1818	-	-	-	5297
Total number of deaths in ditto	-	-	-	231
Mortality somewhat below one in twenty-four.	-	-	-	

## GENERAL RECAPITULATION.

Total of Admissions during nine months, ended 31st, May, 1818	-	-	-	12488*
Total number of deaths in ditto	-	-	-	677

Which gives a proportion of somewhat more than 47 admissions daily, and a mortality in the whole of admissions somewhat below one in eighteen.

\* It is to be observed that the 95 patients in Sir Patrick Dun's Hospital on the 28th of Feb. 1818, are not included in the above number of 4344, although they are included in the General Total of 12,488.



Before proceeding further I shall beg to say a few words respecting the mortality in the Hospitals of the House of Industry, which, as compared with the mortality in some of the other hospitals, will appear excessive.

And, in the first place, the reader is reminded of an observation made by Sir Gilbert Blane, a physician of high authority in such matters, namely, that the comparative mortality of different hospitals is a most fallacious test of the success of Medical Practice, unless the nature and intensity of the several diseases is taken into account.

In the Hospitals of the House of Industry, the patients who died of the epidemic fever were comparatively few, as appears from returns in my possession, but the deaths from other diseases were numerous. Owing to the contiguity of the great pauper depot of Ireland to these hospitals, the most miserable objects of every description are always to be found in our wards. Under the alarm of fever, many were, in the present instance, brought to the Hospitals of the House of Industry from all parts of the city and adjoining country, who were actually dying of other diseases; and as it is a rule of the establishment not to deny admission to any person apparently in a dying state, and as the hospital for chronic patients, into which such persons were wont to be received, was converted, by order of Government, into a Fever Hospital, we had no alternative but to lay these individuals along side of our patients in fever, and

to insert their names in the registry of the Fever Hospital.

In order to throw some light on the causes of the uncommon prevalence of fever in Dublin, an inspection was made of the two streets which, during the months of September, October, November, and December, supplied our hospitals with the greatest number of patients, namely, Barrack-street, and Church-street; and the following paragraph is an extract from the report made by Dr. Peckles and Mr. Macdowell, the Medical Inspectors, who were employed in that duty.

“ Barrack-street and Church-street are in the North side of the Liffey, and in the line of the Northern and Western roads. Barrack-street is nearly parallel with the Liffey, between which and its eastern extremity are yards for cattle and slaughter houses: the river at high-water is nearly on a level with the cellars. In Barrack-street there are 85 houses, the apartments of which are in general much crowded; thus 52 houses contain in 390 apartments 1318 persons, of which number 392 adults are unemployed, the greater number of whom are in a state of extreme indigence. There are several public houses, which are much frequented, particularly in the evenings, and many of the cellars are used as public eating rooms. Soldiers and their followers have hitherto afforded means of subsistence to many room-keepers, who are now in great distress. During the

last three months 111 persons have had fever, which appears in general to have arisen from contagion. Church-street consists of 181 houses, which, with those in the adjoining courts, are much more crowded than the Houses of Barrack-street ; thus, in 71 houses of this street, and adjoining courts, consisting of 393 apartments, 1997 persons dwell, of whom 628 are without employment. In Church-street, 123 persons have had fever within the last three months. Foul lanes, courts and yards are interposed between this and the adjoining streets. A few respectable shop keepers excepted, the entire street is inhabited by persons of the lowest order. There are many cellars which have no light but from the door, which, in several, is nearly closed by bundles of rags, vegetables, and other articles exposed to sale. In some of these cellars the inhabitants sleep on the floors, which are all earthen ; but in general they have bedsteads. Most of the courts are crowded and filthy. Nicolson's court, which immediately joins the Root-market, contains 151 persons in 28 small apartments, of whom 89 are unemployed ; their state is very miserable, there being only two bedsteads and two blankets in the whole court. Fever appeared in three apartments of this court ; in one, the whole family were sick, the individual first affected not having been removed ; in the others only two persons were taken ill, owing to early removal and cleansing. The effect of early removal of the sick, and the cleansing and whitewashing of their apartments, was very remarkable in checking the progress of the disease in some families, while, from the neglect of

these precautions, the number of the sick rapidly increased in others. Two neighbouring houses in Barrack-street afforded an illustration of this remark, namely, Nos. 41 and 47. In the former the disease began in two different families, and its progress was immediately checked by early removal, cleansing, &c. in the latter the individual first affected remained at home, and died of the fever, but not before he had communicated the disease to eighteen persons in a short time."

In addition to the foregoing account it was ascertained that many of the country people, labouring under fever, who came to Dublin in hopes of getting into an Hospital, took up their abode for a night in Barrack-street or Church-street, and next morning were removed to our Hospitals, or to the House of Recovery in Cork-street. It was probably in this way that the disease obtained so firm a footing in these streets.

The conclusions to be drawn from these and similar facts seems to be, that where the disease was introduced among such communities of the poor as had little connexion with the higher ranks of society, and were destitute of employment, and consequently ill supplied with food, clothing, and fuel, among such as, from the severe pressure of the times, were so dispirited as to be indifferent to the danger of infection, it spread with celerity, and pertinaciously maintained its influence.

Between the years 1806 and 1817, as appears from an interesting report of the Fever Hospital in Cork-street, published by Dr. Grattan, the smallest number of patients admitted, in any one year, into that excellent institution was 1056, namely, in the year, ending on the 5th of January, 1810. In the year 1809, there were 1176 patients in fever admitted into the Hardwicke Hospital. From my own knowledge of the poor, gained while I was one of the physicians to the Meath Hospital, I am persuaded, that of the fever patients in Dublin, not one half seek the accommodation of an hospital, unless perhaps during the alarm of an epidemic. Now, supposing there were only 4000 cases of fever in 1809, and of these 4000 cases only one half, or one fourth, nay, supposing only one tenth part were contagious, it is obvious that, even in the healthiest year of the last ten, there was a sufficient stock of contagion in this city to infect its inhabitants, and hence, that fever might have been expected, at any time during that period, to extend itself more or less widely, according to the activity of its predisposing causes, at the head of which are unquestionably an insufficiency of wholesome food and despondency. Nor is it necessary to confine this remark to the population of Dublin. Were this the proper place, I could shew, from authentic documents, that fever has not been extinct in any of the great towns in Ireland, during the period above specified. Before the establishment of Fever Hospitals in Dublin I have reason to think that fever was more

general, and more malignant also and fatal than it has been since.\*

I cannot help observing, that in the street which is contiguous to the principal barrack in Dublin, there were more cases of fever, than in any other part of the city ; and as the disease affected many of the women of the town, whose haunts are in that street, it is probable that the soldiers in garrison were at least as much exposed to contagion as any of the lower class of the inhabitants, and yet they escaped, probably from being but little under the influence of the predisposing causes of fever ; for, to borrow the words of a distinguished medical officer, “ the pay of the soldier is ample ; he is well clothed, well fed, well lodged and well looked after, and all his wants in health as well as in sickness are provided for.” The following return of the fever cases admitted into the King’s Infirmary, (which is the General Hospital of the Garrison,) for the last two years, will show, that although the epidemic had prevailed in Dublin during four months of the year 1817, yet the cases of fever which occurred during that year among the troops, were much less numerous than they were in 1816, which was a very healthy year in Dublin, and thus, I think, we have an additional proof that

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\* These Institutions have been as useful as they are honourable to our age and country, but still they ought to be considered as only a part of a system for extinguishing febrile contagion, the foundation of which must always be an active and scientific Board of Health.

the diffusion of the epidemic depended more upon its predisposing causes than upon any peculiar activity of its contagious principle.

*Return of the Fever cases admitted into the King's  
Military Infirmary for the last two years.*

		Admitted.	Died.
From 25th December 1815	to 24th January 1816	77	2
25th January 1816	to 24th February	84	2
25th February	to 24th March	70	2
25th March	to 24th April	54	2
25th April	to 24th May	32	0
25th May	to 24th June	46	0
25th June	to 24th July	34	1
25th July	to 24th August	29	3
25th August	to 24th September	17	1
25th September	to 24th October	21	0
25th October	to 24th November	27	1
25th November	to 24th December	21	2
Total for the year 1816		512	16

Average number of effectives 4983

		Admitted.	Died.
From 25th December 1816	to 24th January 1817	23	0
25th January 1817	to 24th February	17	3
25th February	to 24th March	17	1
25th March	to 24th April	22	1
25th April	to 24th May	15	1
25th May	to 24th June	44	3
25th June	to 24th July	22	0
25th July	to 24th August	23	0
25th August	to 24th September	44	0
25th September	to 24th October	32	0
25th October	to 24th November	27	0
24th November	to 24th December	50	3
Total for the year 1817		336	12

Average number of effectives 4319.

Indeed, as appears from documents in the office of the Director General of Military Hospitals, the army of Ireland continued to enjoy excellent health up to the latest report, (viz. July 1st 1818) The garrisons in Dublin, Cork, Limerick, Waterford, Clonmell, Kilkenny, Belfast, and other towns, in which the fever was extensively prevalent, were all healthy. The mortality of the whole army in June 1818, was only 12, whereas it was 24 in June 1816, and 22 in June 1817.

There were a good many cases of fever among the pawnbrokers, huxters, and shopkeepers, a numerous body in Dublin, but the disease was rare in the higher ranks, and there were very few instances of the fever extending to a second person in any house in which proper attention was paid to cleanliness and ventilation, which was a compensation for the much greater mortality of the disease when it occurred among the middling or upper ranks, by whom alone such attention could be paid.

Many of the officers of our establishment caught the disease. Eight or nine medical gentlemen of those who were doing duty in the Institution were affected with fever. The Steward, a very valuable officer, while zealously engaged in establishing order in the Richmond General Penitentiary, fell a victim to the disease. All the servants in succession whose business it was to remove the clothes of the patients upon their first admission, were affected with fever in a very severe form. Most of the unseasoned nurses



took the disease. At one time, in the early part of the spring of 1818, in four wards which were under my care, there were three of the nurses ill, now, as there was no relaxation in the discipline of the Hardwicke Hospital, the increase of fever among its nurses probably arose from the fatigue and alarm incident to such a crisis, which, by lowering their health, threw them unusually open to contagion.

From the middle of August until the end of March the state of the epigastrium demanded constant attention. In three cases of four the epigastrium was tender on pressure, sometimes remarkably so. The patients sometimes suffered from irritability of the stomach; nausea being a predominant symptom, and severe vomiting. This condition of the stomach was complained of shortly after the rigor of attack, and continued to be very distressing during the first week of the fever. Epigastric irritation being substituted for pulmonic, the disease in all other respects continued the same; in point of cerebral disturbance in the more advanced period of it, in point of duration and of crisis; but this change, as might have been expected, considerably changed the aspect of the disease. The following was the condition of the patient on the third and fourth, and from that to the ninth or tenth day of the fever—anxious expression, deep and often circumscribed flushing of the countenance, dry tongue, which gradually become brown also, greater heat of the surface, although with less frequent petechiæ, quick weak pulse; cough without

pain in the chest or increase of respiration. In most cases the cough and quickened breathing seemed connected with an irritation seated below the diaphragm ; for when the epigastric tenderness, which was generally the leading feature of the disease in its first stage, was removed, the cough and quick respiration subsided, and the disease ended favourably.

Crisis was generally obtained by sweat, which often followed a rigor. About the time of crisis the patient generally slept much, and the usual changes took place in the urine. It is worthy of remark, however, that some patients rather unexpectedly died, after the struggle of, what had promised to be, a favourable crisis by perspiration.

In many cases attended with alarming symptoms, crisis took place about the fifth or seventh day ; in such cases, however, a relapse occurred very frequently about the end of the second week, and a second and final crisis took place on the seventeenth or twenty-first day, counting from the first invasion. Those of our Institution who caught the disease, servants, nurses, and medical attendants, were very liable to such relapses ; indeed, I never knew relapses so frequent as during the spring of 1818.

The degree of temperature, and frequency of the pulse and respiration were ascertained in one hundred cases during the months of January, February, March, and April, 1818, and the following was the result :

*Temperature.*

95°	97°	98°	99°	100°	101°	102°	103°	104°	105°	106°	107°	108°	109°
1	3	1	3	4	6	4	7	15	15	23	15	1	1

*Pulse.*

30	60	70	72	76	78	80	84	86	88	90	92	96	98
1	1	5	3	2	1	1	3	1	3	4	1	2	1

100	104	106	108	110	112	114	116	118	120	124	126	132	136	150
14	2	5	9	3	4	1	2	2	15	1	2	3	2	1

*Respiration.*

14	16	18	20	22	24	26	28	30	32	34	36	38	40	50
1	5	5	20	5	12	7	11	9	12	1	5	3	4	1

The temperature might be considered excessive in a majority of the cases: in fifty-five cases it was one hundred and five or upwards; in eleven of these cases the pulse did not exceed one hundred and four; and in twenty-five the respiration did not exceed thirty; in seven of these twenty-five the respiration did not exceed twenty in the minute. Headach was a predominant feature of the disease in thirty of the above fifty-five patients, great tenderness of the epigastrium in twenty-eight, while not more than eleven had cough, of whom only five had pain or stitch in the side, and one expectoration of mucus tinged with

blood. It is observable, that while excess of temperature prevailed in so many instances among the patients in Nos. 1 and 4, there did not take place one death among those admitted between the 1st of January and 15th April, when I resigned these wards, except Dempsey in No. 4, and Evans in No. 1, both of whom died, and were removed to the dead house before my visit. It is further observable that there were only nine cases of the whole number (one hundred) in which petechiæ could be discovered.

As in many of the most urgent cases of the epidemic it appeared to me that the epigastrium was the part chiefly affected, I learnt with surprise that the stomach and alimentary canal were sometimes found in an apparently sound state, even in subjects in whom epigastric tenderness had predominated. Thus in a case reported by Mr. Cumming, clinical clerk, in which tenderness of the epigastrium existed during a great part of the disease, on opening the body, not the slightest morbid appearance could be discovered, except a small quantity of bloody serum effused into the cavity of the abdomen, and a very inconsiderable blush in the mucous membrane of the stomach, at the part where the œsophagus enters. In this case, however, a critical effort by sweat took place on the day before the patient died, and perhaps changed the distribution of the fluids, which were thus determined from the centre to the surface of the body. In like manner, in a dissection which was transcribed for me by Mr. Crawford,

in which tenderness of the epigastrium existed on the day before the patient died, all the viscera of the abdomen had a healthy look; there were no morbid appearances, but a small quantity of serum in the cavity of the abdomen, and serous effusion on the surface and in the cavities of the brain. Mr. Crawford adds to this case the following observations: "I have met with a few more cases in which there was epigastric tenderness without any corresponding morbid appearance, but I could not discover them among the number of cases which I have noted; but the case of a woman named Farrell is fresh in my recollection, who, a few days after her recovery from a slight attack of fever, relapsed with severe pain in the epigastric region, and in the whole right side of the abdomen, the left side being but slightly affected. The pain was so great that it prevented her from moving, and occasioned constant moaning. She could not bear the least pressure on the epigastrium, nor on the right half of the abdomen. The pulse was frequent, and very weak, and the feet cold. She got some relief from the application of leeches, and of a blister to the abdomen; the bowels were freely opened, but she died on the third day of her illness. The dissection did not account for such severe symptoms."—Let me add, however, that in the dissections which I have superintended, after those cases of fever in which this symptom predominated, the inner surface of the stomach was always more or less inflamed.

There was another anomaly in dissection which

requires to be mentioned, namely, a state of great congestion, which was sometimes observed in certain portions of the intestines, and which, in as far as I could learn, was not always preceded by obvious symptoms of intestinal disorder. The portions in question were of a dark purple, and sometimes of a puce colour; they were easily lacerated; on neither surface of the intestine was there much morbid secretion. The coats of the intestines at the parts alluded to were separable from each other without difficulty; the coats were not thickened but highly vascular, which vascularity appeared venous. In one of these cases hæmorrhage from the intestines occurred, and yet the appearance differed altogether from that which we see after a fatal attack of Melaena.

Tenderness of the epigastrium was with more certainty and safety relieved by topical than by general bleeding, although the latter was frequently employed also. If the patient was young and plethoric, and was admitted when the disease was in its infancy, and if he complained, as such patients generally did, of pain or tenderness of the epigastrium, was flushed and anxious, I began with venesection; and if he still complained of distress at the pit of the stomach. I ordered ten or twelve leeches to be applied. Venesection was seldom repeated, but leeching not unfrequently, this remedy being one of remarkable efficacy. After the first or second application of leeches, I frequently ordered a blister to the epigastrium, small doses of neutral salts were given, or some of

the saline diaphoretics, and in this manner the distress at the præcordia being relieved, the disease pursued a more temperate course.

It is obvious that no specific rule for regulating the quantity of blood to be drawn can be established : this matter must always be left to the discretion of the practitioner. It is my duty, however, more especially as I have the name of being an advocate for bloodletting in fevers, to state, that several cases have come to my knowledge in which full bloodletting, practised when the disease was confirmed, proved injurious : great prostration followed ; and, although the local determination, which probably demanded a cautious use of the lancet, was subdued, yet the struggle was more dubious than it otherwise would have been. In two instances I had reason to think that full bloodletting was productive of fatal effects ; one of these cases was characterised by vigilance, a tongue scarcely affected, great quickness of the pulse, and confluent petechiæ ; both cases were atactic. But these were instances of the abuse of bloodletting. There are many cases of fever in which bloodletting is inadmissible in any stage of the disease ; and there are many cases in which early bleeding would be salutary, while late bleeding would ruinous ; in like manner, as there are many cases of syphilis or intermittent fever in which mercury or bark, in certain periods of the disease, would be little better than poison : when I am called an advocate for bloodletting in fever, I request it may be understood that it

is discriminative bloodletting which I advocate. In the Hardwicke Hospital twelve ounces of blood were seldom exceeded at one bleeding; ten ounces might be considered the average quantity taken from an adult. There were doubtless some few patients who lost a larger quantity at once; but so impressed was I with the danger of carrying this excellent remedy too far, that when twelve ounces of blood were to be exceeded, I considered it my duty to superintend the operation. Nor did I often prescribe more than twelve leeches, ten or twelve being the number commonly ordered to the epigastrium, and eight to the temple or behind the ear. The head and epigastrium were more certainly to be relieved by topical than by general bleeding. The relief of the lungs was obtained by venesection in the first instance, and then by cupping and scarifying.

I seldom saw a patient early enough for the trial of free bloodletting as a means of arresting the course of fever; the only individual with whom I attempted this summary method of cure was one of our ward-maids. I was not able to superintend the experiment, which did not succeed. The quantity of blood drawn did not exceed twenty ounces; a middle course which I should not recommend any person to follow. It is proper to state, however, that the fever in this individual, although it was not checked, was mild. During the winter and spring I ordered bloodletting sometimes with a view of abating reaction, generally however to subdue organic determinations.



which being accomplished, the crisis followed, almost immediately after, in more instances than could have been excepted ; the result, according with an observation, which I believe may be found in Fordyce, that when any one organ is much more affected in fever than the rest of the system, the whole disease will often abate as soon as the particular organic affection is subdued.

In cases in which epigastric tenderness did not exist, in which the febrile excitement seemed to be equably felt by all parts of the body, in which there were no determinations to the viscera of the thorax and abdomen, and no remarkable determination to the head, the cold effusion was used in some few instances by me, and frequently by my colleagues, and it cut short the disease in several, and in many it moderated its violence. In the more advanced stages of the disease, tranquillity, which lasted for a considerable time, was sometimes obtained by pouring a bucket of water at 95 or 96° over a flushed, delirious, and unmanageable patient.

In some severe cases the bowels were remarkably obstinate, even when there was no fullness of the abdomen, but the contrary. The common attempt to procure stools by drastics, in such cases, rests upon erroneous notions of pathology, and will often fail. In a patient, in private practice, to whom I was called on the 10th day of fever, whose face and scalp were injected with dark blood, who lay supine, breathed

with stertor, and was insensible, the bowels had resisted the most drastic purgatives, and yet there was no obstruction, no fullness of any part of the abdomen, which on the contrary was remarkably lank. Indeed it seemed that the excitability of the intestines was suspended, as well as the secerning function of the abdominal viscera; for the most stimulating glysters had been given in vain, and scarcely any urine had been secreted. In this case the opening of the temporal artery, from which the darkest blood flowed, restored the patient for a few hours to the use of his understanding, but next day he died. In similar cases, after emptying the vessels of the head, employing the tepid affusion and blistering the legs, I should recommend an exhibition of calomel and opium. When, during the epidemic, the affection of the head resisted bleeding, cold applications, purgatives, the tepid affusion, and blisters, we had recourse to a bolus at bed-time, which contained one grain of opium and five of calomel, and during the day, two grains of calomel with a third, or rather a fourth, of a grain of opium, were given every fourth or sixth hour, often with apparent benefit. But surely this combination ought not to be adopted as a general remedy for a disease which was not fatal to one patient in thirty, and which, in three cases of four, required only an occasional bleeding, with due attention to the bowels, free air, and dilution. A course of calomel and opium is very apt to leave the patient excessively weak, and it very generally affects the mouth; by this combination were produced some of the most severe

cases of ptyalism I ever witnessed ; and the mercurial sore mouth is an insufferable grievance to a convalescent from fever, a grievance to which dysentery, also arising from mercury, was sometimes added. At one time, about the middle of January, 1818, I had three or four patients in my wards whose sufferings from the effects of mercury I shall not soon forget ; and at the same time, there was a girl in the hospital whose cheek was perforated by an extensive slough, which was produced by the effects of mercury given in combination with opium.

Of purgatives, cooling drinks, cleanliness, including frequent change of linen and personal ablution, large airy apartments, and thorough ventilation, there appears now to be but one opinion among physicians. With regard to bloodletting, mercury, opium, and wine (to some one of which, in many otherwise excellent works on fever, an undue bias may be discovered) I beg to remind the young, inexperienced, and ardent practitioner, that they are remedies applicable only to particular cases ; and with respect to the use of such powerful means, it may be observed, that while the perfection of our art consists in knowing the exact point at which expectation should yield to action, the greatest authorities in medicine have been more apprehensive of the officiousness of *zcal*, of the *nimia diligentia medici*, than of that degree of distrust in the resources of Prescription which will prevent us from interfering with the operations of nature, upon every trifling alarm.

Calomel and opium did not answer my expectation unless in two modifications of the disease, namely, 1st, in that above alluded to, in which determination to the head was remarkable. Thus, when the fever was characterised by *dun petechiæ*, vigilance, delirious nights, confusion of thought, flushing of the countenance and eyes; when there was a faltering voice, some frequency and irregularity of the respiration, quick unsteady pulse, scanty secretions, without great abdominal tension, calomel with opium was of signal service. 2dly, In an affection of the stomach, which was not uncommon during the epidemic. After excessive irritability of the stomach, which had been quieted by venesection or leeches, and sulphate of magnesia in infusion of roses, the patient sometimes fell into a state of great prostration, indicated by a pale, anxious, collapsed countenance, with a desponding mind, which seemed on the verge of low delirium, a quick, unsteady, and weak pulse, and an iron grey colour of the tongue, which was dry, rather swoln, but scarcely furred. In such cases one-half, or one-third of a grain of opium with two grains of calomel every third or fourth hour, seemed to restore the patient from a situation nearly desperate. I was led to prescribe this combination from my experience of its efficacy in inflammations of the villous coat of the stomach, when it has been given after bloodletting had been urged as far as the case would admit of. But I would have those who attribute the principal part of the benefit which arises from the combination of calomel and opium to the

former ingredient, to read the passage in Fordyce,\* in which small doses of opium are recommended in the second week of fever, as a means of converting delirium into that state of half sleep half stupor, which generally attends a favourable crisis. From small doses of opium, either alone or combined with a common purgative, I think I have seen all the benefit obtained, which we have lately been taught to expect exclusively from the united influence of calomel and opium.

Of the patients who were admitted into the Fever Hospitals of the House of Industry, between the 1st and 10th of September, twenty obtained crisis in the course of the first thirty-six hours, several of these on non-critical days. Removal during a fever from an indifferent room or house, to one more airy, quieter, or more commodious, is justifiable in any period of that disease. In private practice, at our first visit, we ought to consider whether it would be expedient to have the patient removed to a better chamber or lodging; I can answer for the safety of such removal, during fever, of persons of the middling ranks of society, as well as of the lowest class.

Symptoms of the dysentery occurred in some patients after the beginning of October; they not unfrequently formed a part of the disease during the whole winter. In our dissections the mucous-membrane of the stomach and intestines was oftener in a pulpy

\* Fordyce on Fever, Dissertation iii, p. 236, 7, 8.

and vascular state, and coated with a morbid secretion, than it had been during the summer ; but the brain still continued the chief seat of the morbid appearances. I do not recollect a single dissection in which the remains of an excited state of the vessels of the brain did not appear,—in which the surface of the brain was not in an inflamed, or rather subinflamed state, as was demonstrable either from the state of the minute arteries, or from consequent effusions. *Inflamed* would perhaps be too strong a term to apply to a degree of vascular action, which in no instance led to the formation of purulent matter, and which, in only one instance of all the dissections which I witnessed, or were reported to me, ended in the formation of coagulable lymph.

During the winter I occasionally observed cases similar to some of those which occurred in the preceding spring, marked by early prostration, pallid dejected countenance, the tongue as if dusted with chalk, with a triangular stripe of red at the apex, sunken features and stupor, the temperature being low, and the pulse by no means quick ; but these cases were intercurrents only ; the epidemic, in a vast majority of the cases, continued unaltered, petechiæ being early observable, and many being affected with severe pains in the loins, and pains and tenderness all over the body, which deprived them of the power of moving.

These universal pains, which often attended the

fever, were generally relieved by a combination of calomel and antimonial powder, repeated at intervals of four or six hours, and continued for two or three days; a remedy which was also of great use as a preparative for the bark in several cases of rheumatic fever. I learn from some of the gentlemen employed in attending the sick in the Richmond General Penitentiary, that the severe pain and tenderness of the loins, which was a most distressing part of the disease in the summer of 1818, almost always yielded to leeches applied to the lower part of the spine.

In the third week of January, 1818, I had a case of exquisitely marked bronchial inflammation in No. 4; and in the dissecting room an inflamed state of the mucous membrane of the lungs was frequently observed: about this period coughs became rather more common, but cough was not a frequent symptom before the month of May, and even then it was rare compared with the preceding summer.

I never witnessed so large a proportion of patients in fever, jaundiced, as during the summer of 1818. Now, while I am drawing up this report (July 1818) we have what would have been counted by some of the older writers, a strongly marked bilious constitution, which they would probably have referred to the uncommon and long continued heat and drought of the season. The great majority of these cases probably depend upon congestion and active absorption of the bile. The icteroid colour generally yielded to leeches applied to the right hypochondrium, or cup-

ping and scarifying, sometimes blisters and a solution of neutral salts, to which a few doses of the blue pill were generally added ; but many of the cases of this affection doubtless admitted of a spontaneous cure. One patient in fever, in the upper rank of life, became jaundiced on the sixth day of his disease, who had taken calomel every night at bedtime, and castor oil in the morning ; after the appearance of the yellowness of the skin he continued to take three grains of calomel at bedtime with half a grain of opium, and generally a purgative in the morning, for six nights more, at which period the fever left him, the yellowness having previously become faint. Moreover, there were frequently observed two kinds of icteroid fever, which were unconnected with any peculiar epidemic constitution. First, in those who laboured under a diseased condition of the biliary organs (porter, punch, or whiskey-drinkers) ; and under this head two cases are to be referred to, in which gall stones were found impacted in the cystic or common duct. Secondly, in some of those who had been much neglected at the outset of their illness, and who had been reduced in health when the fever seized them ; with these the change of complexion was sudden, and death followed at no great distance of time ; according to the nurses the change was often instantaneous :—" Sir, I went to warm a drink for him, and when I returned he was as yellow as ' a lemon.' " Representations of this kind have frequently been made to me, and, making every allowance for the *ideality* of the lower orders in this country, there is no doubt but that the change was often the work of a very short time.



In the month of March, 1818, the physicians to the House of Industry having found the fever wards obstructed by patients who were labouring under the sequelæ of fever, recommended the Governors to separate these patients from those who were actually in fever. To this, as to every suggestion of their medical officers, the Governors of the House of Industry paid immediate attention, and ordered all such patients as were not actually in fever, or were not in a state of progressive recovery from fever, or its effects, to be removed to the wards in the upper floor of the Whitworth Hospital. Anxious to study fever in its effects, and thus to complete my view of the epidemic, I obtained the charge of these wards, and discovered that the most common sequelæ were diseases of the mucous and serous membranes : tubercular consumption, called into activity by excitement of the bronchial membrane, and which always ran a rapid course ; hydrothorax and hydrocardia, hæmatemesis, dysentery, ascites, and ophthalmia. Chronick rheumatism was not infrequent ; and there were some other affections of more rare occurrence : mania, paralysis, hysteria, an affection, not confined to the female sex, resembling phlegmasia dolens. But the subject will be best illustrated by a tabular view, which the reader will find at the end of this report.

The following tables are constructed in imitation of table I. and II. in my first report, prefixed to which there are some explanatory remarks, to which the reader is referred upon the present occasion.

It appears from the first column of the first table, that of the patients admitted 368 were males, and 333 were females; and that the deaths among the former were twenty-six, while among the latter they were seventeen only.

Of the columns of general and topical bleeding it is observable, that seventy-seven patients were let blood twice, sixteen three times, nine four times, one five times, and one six times; thus the number let blood was reduced to 371, and it was frequently to such as were let blood from a vein that leeches were applied.

Columns of wine, porter, and punch.—I never withheld wine when it appeared to me likely to be of the least use to a patient; nay, sometimes I gave it to those who greatly longed for it, even when it appeared that they but little required cordial support; notwithstanding which, the allowance, had it been equally apportioned, would not have given a pint each to 701 individuals. I have already remarked that there is but little economy in substituting punch for wine; a physician who wishes to maintain discipline will not introduce punch into his wards. Perhaps I ought to acknowledge, that I cordially dislike both the sight and smell of punch, from having so often witnessed the ruin that ardent spirits, unmixed or diluted, brings upon the health and morals of the poor of this country.

With regard to table II. the reader is requested to observe, that the following persons died in less than twenty-four hours after their admission, viz. 348, Mary Kennedy; 369, Alice Conroy; 454, Rose Sweetman; 550, Cromwell Coghlan; 794, Matthew Lawler; 1147, Alexander Graham; 1877, James Reilly; 1192, Eliza Dempsy; 1415, Thomas Evans; and that 634, Pat. Tynan died in thirty-six hours after he was admitted. Secondly, That in 429, Peter Doolan, and 1666, Cicely Fox, the extremities were livid, and in 803, Mary Malone, the back was in a state of slough when they were admitted; and thirdly, that Catherine Fay died of hepatic abscess and abortion; 344, Joseph Saville, of chronic inflammation of the lungs; 446, Pat. Mahony, of paralysis; 480, Terence O'Neill, of hydrocephalus after insanity; 741, Catherine Farrell, of pneumonia; 558, Laurence Harris, of urinary abscess; 640, Pat. M'Coote, of inflammation of the stomach; 1237, Michael Magee, of sloughing of the penis; 1763, Jane Ryan, of consumption; and 2215, Edward Martin, of dysentery. Had such as were bona fide dying, when they were admitted into the hospital, been placed in a separate ward, the mortality, instead of being one in between sixteen and seventeen, would not have been one in thirty; nay, from December to the end of June, in our whole hospital establishment, it would not have been one in forty.

B in the last column of this table, intimates that the patient was bled; N. B. that he was not bled; of

those who died of fever, very nearly two thirds were not let blood.

Most of the dissections which follow were made by Mr. Macdowell, on whose knowledge of anatomy and accuracy of description the reader may implicitly rely.

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It was originally my intention to continue my labours in the Fever Hospital for another year, expecting, in a period of three years, to meet with most of the common varieties of the continued fevers of this country; but, by the resignation of my friend, Dr. Edward Percival, a part of the Hospitals of the House of Industry which does not contain any patients in fever, has fallen to my charge, and hence, as I no longer possess the same ample opportunities of observing the phenomena of fever, this shall be the last publication on that subject with which I shall trouble the reader.

TABLE I.

1817 & 1818. Month.	No. of Ward.	No. of Admissions.	No. of Discharges.	No. of Deaths.	No. of Bloodlet- tings.	Arterio- tomy.	No. of Leechings.	No. of Cupping.	P Wine, No. of Ounces.	Punch. No. of Pints.	Porter. No. of Pints.
April.	1	21	19	2	28	2	3	2	362		9
	4	22	18	4	24	1	2		594		1
May.	1	34	30	4	30	2	1		524		
	4	35	33	2	22	6	2		244		
June.	1	34	29	5	27	5	2		502		1
	4	29	29		30	8	2		100	5½	16
July.	1	28	27	1	13	5	10	1	442		
	4	29	28	1	20	7	3		466		
August.	1	34	32	2	26	6	15		382		
	4	34	33	1	27	2	7	1	306	2	
September.	1	39	35	4	31	3	19	1	366		
	4	30	29	1	26	1	23		352		
October.	1	29	27	2	28		12		458		
	4	31	28	3	32		18		294		
November.	1	37	33	4	19		17	2	228		
	4	30	28	2	16		22	1	498		
December.	1	33	32	1	21		16	5	282		
	4	27	25	2	7	1	9	1	404		
January.	1	25	25		17	16	22		416		
	4	21	21		12	10	20		492		2
February.	1	25	24	1	17	5	24	1	320		
	4	24	23	1	12	7	16		490		7
March.	1	29	28		18	3	27		166		
	4	21	21		13	4	16		172		
Total. . .		701	657	43	516	97	308	15	8860	7½	36

TABLE II.

*Extracted from the Registry of the Hardwicke Fever Hospital.*

No. of days sick before admission.	No. in the Registry.	Name.	Age.	Religion.	Born.	Occupation.	Admitted.	Went.	Died.	Remarks.
7	34	Catherine Fay	26	R.C.	County Louth	Lab.'s wife	April 15	4	April 30	Hepatic Abscess.
10	34	Joseph Saville	61	P.	Co. Wicklow	Labourer	April 17	1	May 6	Chronic Inflam- mation of lungs.
7	348	Mary Kennedy	31	R.C.	County Meath	Lab.'s wife	April 17	4	April 18	Pneumonia.
3	362	Alice Conroy	26	R.C.	Co. Leitrim	Servant	April 23	4	April 24	Enteritis.
6	373	Robert Short	22	R.C.	Queen's Co.	Drayman	April 24	1	April 26	B.
6	376	M. Ann M'Mahon	26	R.C.	Dublin	Servant	April 25	4	April 26	B.
28	435	Catherine Duke	45	R.C.	County Dublin		May 6	4	May 16	N. B.
35	440	Peter Dolan	50	R.C.	County Dublin	Labourer	May 6	1	May 9	N. B.
35	443	Thomas Mahony	50	R.C.	Cork	Nailer	May 10	1	May 20	Paralysis.
2	454	Rose Sweetman	50	P.	Dublin		May 12	4	May 13	Apoplexy.
4	464	James Gough	41	R.C.	From England	Pedlar	May 15	1	May 20	N. B.
60	480	Terence O'Neill	29	P.	From House of Industry		May 20	1	May 22	Hydrocephalus af- ter insanity.
6	538	Terence Hanlon	27	R.C.	County Louth	Labourer	June 2	1	June 10	B.
	550	Crom. Coghlan	34	P.	County Down	Shoemaker	June 3	1	June 4	N. B.
60	558	Lau. Harris	39	R.C.	County Cork	Coachman	June 7	1	June 27	Urinary Abscess.
7	634	Patrick Tynan	38	R.C.	Queen's Co.	Cooper	June 23	1	June 25	N. B.
3	640	Patrick M'Coot	37	R.C.	County Louth	Labourer	June 26	1	July 4	B.
6	741	Cath. Farrell	40	R.C.	Co. Dublin	Servant	July 21	4	July 27	Pneumonia.
7	761	Patrick Lunney	31	P.	Co. Fermanagh	Labourer	July 25	1	July 31	B.
	794	Matthew Lawler	50				Aug. 2	1	Aug. 3	Speechless.
9	803	Mary Malone	22	R.C.	Dublin	Servant	Aug. 4	4	Aug. 8	N. B.
8	829	John Augier	52	P.	Dublin	Silk Weaver	Aug. 11	1	Aug. 18	N. B.
5	1004	Cat Cunningham	40	R.C.	Roscommon	Servant	Sept. 6	4	Octo. 3	N. B. Leechd.
	1147	Alex. Graham	60	R.C.	Dublin	Cutler	Sept. 16	1	Sept. 17	N. B.
	1237	Mich. McGee	28	R.C.	Monaghan	Smith	Sept. 23	1	Octo. 1	Sloughing of Penis.
	1241	Dennis McGuire	50	R.C.	County Meath	Labourer	Sept. 23	1	Sept. 27	N. B.
7	1510	Simon Taylor	41	R.C.	Jamaica	Sadler	Oct. 12	1	Octo. 29	N. B. Leechd
6	1633	Andrew Lawler	56	R.C.	Queen's Co.	Carpenter	Oct. 19	1	Octo. 30	B.
7	1666	Cecily Fay	36	R.C.	Galway	Servant	Oct. 21	4	Octo. 25	Arteriotomy.
7	1710	Eliza Loftus	30	P.	Derry	Servant	Oct. 25	4	Nov. 13	B.
10	1741	Jane Ryan	24	R.C.	Dublin	Servant	Oct. 28	4	Nov. 18	Consumption.
21	1877	James R.illy	40	R.C.	County Meath	Labourer	Nov. 8	1	Nov. 9	N. B.
6	2621	Hugh Reilly	30	R.C.	Cavan	Labourer	Nov. 18	4	Nov. 28	N. B. Leechd.
6	2055	Anne Keane	55	R.C.	Queen's Co.		Nov. 20	4	Nov. 30	N. B.
8	2059	Eliza Herne	19	R.C.	Dublin	Servant	Nov. 20	4	Nov. 25	N. B.
3	2218	Edward Martin	11	R.C.	Dublin		Nov. 30	1	Dec. 4	B.
5	2218	Phillip Mills	46	P.	Limerick	Watchman	Nov. 30	1	Dec. 7	N. B.
3	2296	Arthur Magee	45	R.C.	Armagh	Labourer	Dec. 4	1	Dec. 21	B.
3	2631	Eliza Willis	4	R.C.	King's County	Servant	Dec. 10	4	Jan. 4	B.
4	2761	Anne Mooney	40	R.C.	Co. Westmeath	Servant	Dec. 28		Jan. 7	
4	1192	Eliza Dempsey	30	R.C.	Queen's Co.		Feb. 13	4	Feb. 14	N. B.
6	1415	Thomas Evans	53	P.	King's Co.	Shoemaker	Feb. 19	1	Feb. 20	N. B.

343, Catharine Fay, was admitted on the 7th of April on the 8th day of her illness, she had hectic fever which appeared to arise from an hepatic abscess, for, along with rigors, she had pain in the right hypochondrium, dry cough and irritability of the stomach, and she became deeply jaundiced. After aborting on the 29th, she was seized with convulsions and died shortly after.

344, Joseph Saville, admitted on the 17th day of April, was an emaciated enfeebled old man, who had been in a fever for three weeks, but as his pulse was only 72, and temperature 98°, it seemed to have subsided, leaving him with a cough, oppression at the chest, and difficult expectoration; so neglected had he been that for five days previous to his admission he had been without a stool. His pulse soon became quick, the oppression of his breathing was accompanied with a circumscribed flush of his cheeks, hectic fever became confirmed, and he died on the 6th of May.

348, Mary Kennedy, subject to a short cough and dyspnoea, was admitted on the evening of the 17th day of April, on the 9th day of her illness, which arose from the fatigue of travelling for several days under a heavy burthen. The symptoms of her complaint on the 18th were cough, oppression of the chest, expectoration of yellow mucus, livid flushing, headach, pains in her bones, great thirst and constipation for four or five days. P. 130, Resp. 44, Temp. 100°.

*Abtradantur Capilli. Mitt. Sanguis ad 3 vi. Fov. Crura. Vesicatorium amplum Pectori. Decocti senekae 3 i, 4tis horis.*

Blood, with a thick coating of pale size, not less than three-fourths of an inch; crassamentum dark and grumous. In the evening she became faint and lethargic, and died about eleven o'clock, p. m.

DISSECTION.—The liver extended considerably below the margin of the ribs. The stomach, containing a considerable quantity of fluid, was greatly distended with flatus. The lower part of the jejunum was more than usually vascular. The right lung did not recede like the left; it was much enlarged, and was connected by recent adhesions, easily broken up, to the diaphragm and pericardium, and at the upper and back part to the pleura costalis; although it appeared more than usually solid, it broke down with ease under the finger. The left lung was healthy externally. The mucous membrane of the trachea was inflamed, and the inflammation extended into the bronchiæ. A considerable quantity of puriform matter flowed from the cellular structure of the lungs. The increased size of the right lung accounted for the descent of the liver. The right side of the heart was greatly distended with coagulated blood. There was a small quantity of fluid in the lateral ventricles of the brain.

369, Alice Conroy, æt. 26, from a lane chiefly inhabited by prostitutes, admitted on the 23d of



April. She was seized on the 21st, in the evening, with chills, which were speedily followed by a pain in the abdomen which never ceased. Its principal seat was round the navel, and it was so agonizing that she screamed without ceasing during the nights of the 21st and 22d. The abdomen was tumid, especially round the navel; it was very impatient of pressure. She had had no stool; she instantly vomited every thing she swallowed. Her countenance was pale, her neck and breast were covered with petechiæ, her arms and legs were of a livid mottling, and cold. She had great thirst; her pulse was not discoverable, her respiration was 38. I could not discover any herniary tumour. She importuned me so pitifully to have something done for her relief, that I directed the apothecary to open a vein, from which only six ounces of blood were allowed to flow, as she became faint.

*Enema terebinthinatum. R. Opii granum, Hydrargyri submuriatis grana quinque, M. f. Bolus sum. tertiis horis.*

Three o'clock. She had passed two stools, consisting almost entirely of blood.

She lingered till the morning of the 24th.

DISSECTION. A quantity of foetid gas escaped on opening the cavity of the peritoneum, which contained nearly two pints of dark coloured fluid, like blood mixed with water. The liver had the universally tuberculated structure, which is frequently found

in incorrigible drunkards, who perish in youth. The stomach contained a greenish fluid not unlike fæces, on removing which, however, it appeared perfectly healthy. The jejunum was intensely inflamed throughout its whole extent; about a foot from its commencement it became black; on raising its serous membrane, this dark colour seemed principally in the muscular coat; the mucous membrane was of a deep crimson colour. The intestines at this part contained a fluid nearly as black as ink; advancing towards the ileon the inflammation diminished, the lower part of the ileon was in a state nearly natural. The ascending position of the colon under the liver resembled the jejunum. There was nothing remarkable in the rest of the alimentary canal.

374, Robert Short. This man's case, together with the dissection, has been given in the body of the report v. p. 24. as also the case of

376, Mary Anne M'Mahon, v. p. 21.

426, Catherine Duke was reported to labour under an ague, probably a double tertian, for she had a rigor every day. In a day or two after her admission, the course of her complaint was interrupted, and she appeared to labour under a continued fever. On the 6th day after her admission her chest became oppressed; the bark, which she was taking, was stopped, blue pill with ipecacuan was prescribed, and she was blistered. Her respiration became very laborious,

and she had an oppressive cough. She died on the 10th day after her admission.

429, Peter Doolan, May 7. Had cough all the winter. Had laboured under his present illness for nearly six weeks : headach, oppression at the chest, severe cough, with free expectoration, soreness in the epigastrium, thirst. Brown stripe in the centre of the tongue, edges white. Bowels free : feet cold. Considerably within a period of four hours, and after bottles of warm water had been applied to the feet to remove their coldness, the natural colour of the right leg was changed to purple. P. 116, very small. Resp. 44, laborious. Temp. 98. *Vesicatorium sterno. Pilulæ calomelanos cum Ipecacuanha.*

May 8. Moribund.

446, Thos. Mahony, an exhausted old man ; of this man's case we were able to collect but a very imperfect account. There was no one in the house with him during his illness but a little girl, who said that for five weeks he had been in the habit of rambling about the house without any apparent intention, and that being very feeble, he frequently fell to the ground. On admission he complained of headach, and of the state of one of his arms, which was completely paralysed ; he affirmed that his bones were all broken ; he continued muttering and raving, passing his stools in bed, and he died on the 10th day after admission.

454, Rose Sweetman, was an incorrigible drunkard,

and was brought into the hospital labouring under apoplexy, of which she died in a few hours after the visit.

464, James Goff, May 16, sixth day of fever, P. 104. Resp. 32. Temp. 106°. Flushed countenance; inflamed eyes; brown tongue—dry central line, white edges; thirst. Restless delirium, anxiety, debility; severe pain over the eyes, and in his loins; had been without a stool for three days. *Bolus calomelane*.

May 17. Four stools. *Pulv. Ipecacuanhæ gra. xx, Mist. sennæ cum camphora*.

May 18. Four stools. Pulse 80. Refused his medicine. *Vesicatorium Nuchæ. Vini 3 vi*.

May 19. Two stools. Refused wine. Resp. 48, and moaning; insensible; extremities comfortably warm; an abundant crop of vesicles with florid edges appeared after the visit of yesterday. *Enema commune*.

May 20. Hands, back, and shoulders of a purple colour; extremities warm.

May 21. Died at eleven, p. m. after an attack of convulsions.

480, Terence O'Neill, May 20, a lunatic, was admitted after an illness of two months; his tongue was white, and he complained of headach and cough.

Resp. 24. Temp. 98°. Pulse 72. He died on the 24th of May. The principal appearances of disease were in the head. There were six or seven ounces of fluid in the ventricles, and a large ossification of the falx.

539, Terence Hanlon, 3d of June; the sixth day of his illness. Countenance flushed; temperature high, skin covered with dun petechiæ; P. 108; vertigo; severe headach and great debility. Oppression of chest, severe cough, with difficult expectoration, tinged with blood. Bowels costive, apex of the tongue florid, base covered with yellow mucus; considerable thirst. *Mitt. Sang. ad 3 viii. Bolus e calomelane,*

June 4. Delirious night, flushing. T. brown and dry. *Abradantur Capilli. Mistura Sennæ cum camphora. Foveantur crura.*

June 5. Very delirious. Three natural stools. Tongue dark and dry, unable to protrude it. P. 120. *Mitt. Sanguis ex arteria Temporalis ad 3 viii. Cont. alia.*

June 6. Wandered all night through the wards. One stool. Tongue shrivelled up and black. Feet and legs beset with purple petechiæ. *Bolus e calomelane. Vesicatorium nuchæ.*

June 7. Only one stool. Muttering delirium, restlessness, subsultus, floccitation. *Misturæ Pur-gantis 3 i. tertiis horis. Enema. Vini. 3 iv.*

June 8. Three inconsiderable motions. Flushing. Subsultus to a great extent; refused wine: P. 116; R. 38; Temp. 95°. *Porter or Punch. Bolus e calomelane sextis horis; Vesicatoria suris. Enema.*

June 9. Large foetid discharges from his bowels; less subsultus. Spit out the porter. P. 120; Resp. 40; Temp. 97°, *Punch.*

June 10. Died about 9 o'clock, a. m.

**DISSECTION.** On raising the dura mater we found that effusion had taken place between the arachnoid membrane and pia mater. Towards the back part of the left hemisphere, and at the anterior part of both hemispheres, the pia mater was highly inflamed. The ventricles contained between three and four ounces of fluid. The plexus choroides was rather more pale than usual. The pia mater covering the pons varolii was unusually vascular. There was no distinct appearance of recent disease in any other part of the body.

550, Cromwell Coghlan, June 4. Admitted on the evening of the 3d June, in the fifth day of his illness. He then complained of a stitch in his left side; troublesome cough; great debility and thirst; tongue brown in the centre; pulse 120; resp. 32. He had been let blood, and had taken purgatives with relief before admission. In the course of the night he had two stools. He complained of pain in the left side; he was pale, with sunken eyes; had short oppressed cough, rapid and small pulse. He died in the course of the evening.

568, Laurence Harris. This man's case is related at p. 27.

634, Patrick Tynan, June 24. Admitted in the evening of the 23d, from a house in which there were several persons in fever. He wandered about the wards in a state of restless delirium. Tongue blackish brown; eyes suffused, countenance flushed, subsultus tendinum; skin covered with florid petechiæ, legs and hands cold and livid; right leg purple; he fell into a state of stupor in the night, and died in the course of the morning of the 25th.

640, Patrick M'Coote, June 27th. Had been about a fortnight sick, when he was admitted into the hospital. He had previously been affected with a cough and oppression of the chest. Pain and soreness at the scrobiculus cordis; cough and expectoration of mucus mixed with blood; nausea, vomiting; severe headach, restlessness, lassitude and debility. *Mitt. Sanguis ad ʒx. Vesicatorium Epigastrio. R. Pilulæ Hydrargyri, Pulveris Ipecacuanhæ compositi, aa drachmam dimidiam. f. Pil. duodecimumat. unam quartis horis.*

June 28. Relief after blood-letting; four stools; pulse 100 and hard; is unable to lie down in bed. *Mitt. Sanguis ad ʒxii. Cont. Pil.*

June 29. Relief after blood-letting. Mucous vomiting; pain in the course of the sternum aggra-

vated by coughing. *Mitt. Sanguis. Vesicatorium Sterno. Cont. Pil.*

June 30th. Vomiting continued. *Solutio sulphatis magnesicæ in infuso rosæ. Haustus salinus.*

July 1. Four stools. Load and oppression in the whole course of the sternum. *Pil. Hydrarg. grana quinque, h. s. Haustus purgans primo mane.*

July 2. Weak and desponding; bowels free; *Vesicatorium inter scapulas. R. Mist. Camphoræ unciæ, Tinct. opii camphoratæ semidrachmam. m. f. haustus, quartis horis sumendus.*

July 3. Great languor, debility and depression of mind. Lethargic; pulse 80; return of sickness. *R. opii grana duo, calomelanos grana duodecim, conservæ Rosæ q. s. f. pilulæ sex, sumat unam quartis horis.*

July 4. While at the night chair, he was seized with convulsions, and died in a few minutes.

DISSECTION. Liver, which appeared large, was in a state of biliary and sanguineous congestion. Stomach, which was distended with gas, contained a small quantity of fluid, of an inky colour, mixed with mucus. The stomach was flabby and uncontracted; its mucous membrane thickened, florid, from innumerable points of extravasation, and coated with a very tenacious mucus,—opaque and yellow. The



inflammation of the mucous membrane extended to the duodenum, jejunum, and some parts of the ileum, the lower part especially. Some of the intermediate parts were sound. The small intestines, although in general dilated, were in some parts very remarkably contracted. The trachea was full of frothy mucus, its mucous membrane was slightly inflamed. There were several pints of serum in the right cavity of the pleura.

741, Catherine Farrell, July 21st. Seventh day of her illness, which she attributes to cold. Temp. 103°. Skin dry; much flushed. Tongue dry, and coated with yellowish mucus, thirst, foul taste; stitch in the right side, oppression at the heart, laborious respiration, cough and expectoration tinged with blood; severe headach, restlessness and debility. *Mitt. Sang. ad 3 x, Mist. & Pilulæ purgantes.*

July 22. Bowels free. Pain of side, and oppression at the heart. Expectoration free. R. *Pilulæ Hydrargyri 3ss, Pulveris Ipecacuanhæ grana octo, f. Pilulæ duodecim; Sumat unam 4tis horis.*

July 23. Three stools. Temp. 104°. Respiration heaving; some expectoration, which was bloody. Tongue much loaded, with livid edges. *Mitt. Sanguis, Vesicatorium amphi Pectori. Cont. Pilulæ.*

July 24. Considerable relief after blood-letting. Blood sizzly. Temp. 104°. *Cont. Pilulæ. Mist. Camphoræ cum tinctura opii camphorata,*

July 25. *Mitt. Sanguis ad 32. Vesicatorium inter scapulas.*

July 26. Blood *sizy*. Bowels free; respiration improved. *Cont.*

July 27. She was reported to have become suddenly yellow about two o'clock yesterday; in the evening, the breathing being much oppressed, she was let blood, by the apothecary, to the amount of eight ounces. Blood cupped and buffed. She died about two o'clock in the morning.

**DISSECTION.** Thirty-two hours after death. On cutting into the cavity of the thorax, the lungs did not recede. The left lung was free from any adhesions, and was perfectly sound. The right lung, throughout the greatest extent of its convex surface, was adherent to the parietes, partly by long filaments, but chiefly by a close connexion. The adherent pleuræ were thickened and opaque. The upper third of the lung was healthy, the remaining portion was firm and incompressible like liver; there was a distinct division between the two portions of lung, the sound portion terminating as abruptly as the diseased commenced. The disease seemed to consist in an increase of the solid substance of the lung: its colour grey, with dirty yellow intermixed. Fluid of the appearance of pus could be expressed from the divided bronchiæ. The diseased part of the lungs sank rapidly in water. No diseased appear-

ance was discoverable in the brain. The abdominal viscera were sound.

761, Patrick Lunney, 26th July. Eight days ago he incautiously lay down on the ground in the evening, and continued there for a considerable time ; in half an hour after getting up he had a rigor, which was followed by pain across the breast and severe headach. He had flushing of face, and inflamed eyes ; cough ; dry tongue with florid edges. Pulse 120. Temp. 102°. measly efflorescence all over the skin. Bowels free. *Mitt-Sang. ad 3x.\**

July 27th. Temp. 106°. Inflamed eyes. Hard cough and soreness of the chest. Vomiting of bright bile, and epigastric tenderness. *Vesicatorium pectori. Solutio sulphatis magnesiæ in infuso Rosæ.*

July 28th. Temp. 105°.

July 29th. Four stools. Pulse 82, and very irregular. Temp. 103°. Resp. 44. laborious ; dry cough ; tongue dry ; supine ; great debility. *Bolus e calomelane. Vini 3vi. Fov. crura.†*

\* This is one of the patients in whom the temperature rose after bleeding. The following are the particulars of the experiment :

July 26. 12 o'clock. Temp. 102°.	
Arm tied up, and ten ounces of blood quickly taken away.	
10 m. p. 12.	Temp. 102°.
$\frac{1}{2}$ p. 12	103°.
40 m. p. 1	105°.

† There is a note made after this day's report, of which the following is a copy :

July 30. Pulse so weak and irregular as not to be countable. Respiration laborious and frequent. Tongue moister; extreme debility. *Cont.*

July 31st. Death in the morning.

**DISSECTION.** Serum of a reddish colour issued from under the dura mater. There were several bright red patches, which arose from an increase of vascularity of the pia mater on the surface of the brain. The brain was firm. With the exception of about two ounces of fluid in the pericardium, every thing appeared natural in the thorax. The liver was soft in texture, easily torn, and of a brown colour. There was a broad and firm adhesion of the arch of the colon to the concave surface of its right lobe. The rest of the abdominal viscera appeared healthy.

794, Matthew Lawler. No account could be obtained of this man's illness. When admitted on the 2d of August, he was in a state of low muttering delirium. He was affected with singultus. His pulse was intermitting and thready. His complexion dusky red. He died on the morning of the 3d.

**DISSECTION.** Under the pia mater, which covered the inferior half of the left hemisphere of the brain,

5 minutes after taking 2oz. wine.	Temp. 105°
15 minutes after	105°
30 minutes after	105°

by which it should seem that 2 oz. of port wine had raised the temperature 2 degrees.

there was a very thin layer of effused blood in a fluid state. The pia mater corresponding was of a bright red colour. There were numerous patches of the same colour on the pia mater, covering the right hemisphere. The tunica arachnoides, between the convolutions, was thickened and opaque. The substance of the brain was very firm. The whole of the convex surface of the right lung adhered to the pleura. There was increased vascularity of the mucous membrane of the stomach in patches and minute dots, some dark, others bright red; giving an ecchymosed appearance to its inner surface, which was coated with tenacious mucus. A similar appearance was observable in the ileon.

893, Mary Malone, August 4. The 10th day of her illness; face flushed, eyes suffused; tongue very florid, with a brown stripe. Temp.  $103^{\circ}$ . Pulse 180. Resp. 60, moaning. Some florid petechiæ. Had no stool for four days, during which period she had been in a state of delirium, and great restlessness. Upon examination, there were found large purple patches on her hips and sacrum. She came from the same house with Cosgrave in No. 3.

August 6. Very delirious; cannot protrude her tongue, nor articulate. Large purple patches on the legs, pulse indistinct, but very rapid, constant moaning. Refuses all medicine, and will not drink any thing but water.

August 7. Involuntary stools; breathing very

rapid ; subsultus ; livid patches on her feet. Temp. 104°. Drinks punch.

August 8. Death in the night.

DISSECTION. Arachnoid membrane between the convolutions of the brain was much thickened and opaque, and contained under it a gelatinous substance. The pia mater was very vascular ; in several places there were dark red patches, which seemed to be produced by extravasation, as vessels could not be distinguished. There was no blood between the membrane and the brain at those places. The veins between the convolutions of the brain were distended with blood ; the texture of the brain was rather firmer than usual ; there was scarcely any fluid in the ventricles. No diseased appearances were discoverable in the viscera of the thorax or abdomen, save a few arborescent patches of the small veins of the mucous membrane of the stomach.

829, John Aungier, A worn-out man, who, from being in comfortable circumstances, had fallen into poverty. August 11th. He had been ill about a fortnight ; slept well ; had no complaint but weakness. Tongue moist, covered with cream-coloured mucus ; no thirst ; bowels confined. *Pilulæ Purgantes. Mistura Purgans.*

August 12. Four involuntary stools. Measly efflorescence of the skin ; tongue black and dry ;

some cough. *Vesicatorium Pectori. Vini ℥iv. Mistura Sennæ cum Camphora.*

August 13. Doses much. Three involuntary stools. Involuntary urine. *Fov. Crura. Mist. Camphoræ cum Aqua Ammoniac acetatis. Vini ℥vi.*

August 15. Coughed and retched all night. Tongue dry and brown. Epigastric tenderness; great debility. *Vesicatorium Epigastrio. Vini ℥vi.*

August 16. After a miserably restless night, a large parotid was discovered this morning on the right side. Pulse feeble and intermitting. Extremities cold; moans much, *Fov. Crura, Haustus Anodynus.*

August 17. Death,

DISSECTION. On cutting into the tumour it was found to be very vascular; the granules composing the parotid gland were much enlarged, and firmer in their texture than natural, and seemed separated from each other by distinct filaments derived from the capsule of the gland, which was remarkably distinct and firm.

1004, Catharine Cunningham, Sept. 6. Had great headach, oppression of the chest, cough, tongue white and moist.

Sept. 8. Severe headach. *Abrad. Capilli. Mist. Sennæ et Camphora.*

Sept. 14. Convalescent. Full diet.

Sept. 16. After dinner a sudden attack of severe pain in the bowels, followed by mucous and bloody stools.

Sept. 17. Almost uninterrupted vomiting; very great pain in the abdomen.

Dec. 3. Death from unconquerable dysentery.

Mary Kelly, Sept. 7. This patient during her convalescence, was attacked with a painful œdematous swelling of the right leg and thigh, like phlegmasia dolens, which was by no means uncommon after fever, and it was attended by a dysenteric affection, of which she died. This patient's name does not appear in the registry, she having been a deputy nurse of the ward in which she died.

1147. Alexander Graham was brought into the hospital in a dying state, and expired some hours before the visit.

1237, Michael Magee, when admitted into the hospital, had inflammation of the penis, with ulcers under the prepuce, but being in a state of complete fatuity, we could not obtain any history of his complaint. The inflammation terminated in sloughing of the penis, which he survived only two days.

1245. Dennis Macguire was an emaciated, ex-



hausted man ; he had a severe cough, and was unable to expectorate. He was a subject for palliatives merely.

1510. Simon Taylor. Five of this man's family were in fever. Oct. 13th, eighth day of illness. Three stools since his admission. He was pale, felt cold and weak ; tongue dry and red in the centre ; edges moist, covered with cream coloured mucus ; foul taste ; some epigastric tenderness ; deaf ; averse to light ; complained of pains in his eye-balls ; slight cough. P. 112. R. 28. T. 103°. *Mist. sen-næ cum Camphora.*

Oct. 15. Epigastric tenderness. *Hirudines oc-to Epigastrio. Solutio Sulphatis Magnesiae.*

Oct. 16. Great stupor and deafness, with much debility ; cough, with free expectoration of pale yellow mucus. Pulse 140, Resp. 40, and laborious. *Pulv. Ipecacuanhæ gra. xx. Vesicatorium inter Scapulas. Vini ℥iv.*

Oct. 17. Vomited whitish mucous matter. One stool. Stupor ; deafness ; cold feet ; pulse 120. *Vesicatorium Capiti. Fov. Crura. Mist. Sennæ Camphorata. Vini ℥vi.*

Oct. 18. One stool. Moaned and raved for about two hours ; slept the rest of the night. Great deaf-

ness. Tongue covered with a dry brown crust. Pulse 132. *Vini* ℥viii. *Contr. alia*.

Oct. 19. Three stools. Slept pretty well. Incoherent; tongue covered with a dry black crust; protruded with difficulty, and not drawn in till repeatedly desired. *Contr.*

Oct. 20. Three stools. Supine. Muttering delirium. Pulse 124. Refuses every thing but the wine. *Vini* ℥x. *Vesicatoria suris*.

Oct. 21. Three stools. Raved all night. Cough without the power of expectoration. Considerable epigastric tenderness. Sighing. Pulse 124; feeble. Resp. 23. Cold extremities.

Oct. 22. Subsultus. Black crust on the gums and lips. Surface of the body cold. Pulse indistinct. Many flies settle upon him.

Oct. 23. Death.

DISSECTION.—Not permitted.

1633. Andrew Lalor, an infirm man, with all the appearance of age. Oct. 20, 7th day of fever. Much tenderness of the epigastrium. *V. S. ad* ℥viii.

Oct. 22. Tenderness of the epigastrium not relieved. *Hirudines x. et Vesicatorium*.

Oct. 24. Two stools. Pulse 88; intermitting. Loose cough; tremors; subsultus; vertigo; incoherent delirium. Tongue covered with a dry brown crust.

Oct. 26. Very uneasy night. Tongue covered with a dry black crust; protruded with difficulty. Tremulous motion of the inferior maxilla. Subsultus; moaning; pulse 108,—intermitting. Slight cough.

Oct. 27. Two stools. Supine; muttering. Pulse 120; laborious respiration (60). Tenderness of the epigastrium. Swelling of the right parotid gland.

Oct. 28. Death.

DISSECTION.—Not permitted.

1666. Cecily Fay, æt. 36, Oct. 22. 7th day of her fever. No stool for twenty-one days; one since admission. Pulse 120. Resp. 40. Countenance livid; eyes inflamed; headach; thirst; tongue with a black crust in the centre. Gums and lips covered with black sordes. Great debility. On admission her feet were cold and livid; they are now of a natural heat.

Oct. 24. Three involuntary stools. Tongue with a black crust. Debility. Short, hurried and moaning respiration (60) P. 128.

2 o'clock. Face quite black. *Mitt. Sang. ad*  
*3viii. ex Art. Temporalis.*

The blood was taken in two cups ; that in the first separated into serum and crassamentum, which was buffed and cupped ; that in the second was uniformly coagulated, and but little serum exuded from the coagulum, which was without size.

Oct. 25. Very restless night. Moaning, laborious respiration, countenance and nails livid ; unable to protrude her tongue. She died at two o'clock, p. m.

DISSECTION.—The sinuses of the dura mater were full of blood in a fluid state. On slitting round, and elevating the dura mater, there issued a reddish fluid in quantity about two drachms. On each convex surface of the cerebrum there were large patches of a deep red colour, and numerous smaller ones presented themselves ; they appeared to be produced by extravasated blood, but on elevating carefully the pia mater, none was found between that membrane and the surface of the cerebrum, the appearance being caused by a great increase of the natural vascularity of the pia mater, and by the contiguous capillary vessels being injected with blood. The arachnoid membrane was unaltered. The brain was remarkably firm ; its sections shewed an increase of vascularity. There was no fluid in the ventricles. No appearance of disease could be detected in the viscera of the thorax or abdomen.

1710, Eliza Loftus. This was a case of fever supervening upon dysentery. Admitted on the 25th of October.

Oct. 29. Slight headach, increasing at night ; general pains ; skin hot and dry ; thirst ; stools rather less frequent, still mixed with blood ; pulse 86.

Nov. 8. The diarrhoea had returned again. Frequent stools with griping. Much debility. Sensation of internal heat. Tongue preternaturally red and dry.

Nov. 11. Frequent pain in the bowels. Abdomen tender on pressure. White fur at the base of the tongue which is red and dry at the apex. Belly rather confined. General pains. Some retching. Considerable weakness and appearance of great distress. Pulse scarcely to be felt.

Nov. 13. Death.

DISSECTION.—Two pints of an opaque yellowish fluid in the cavity of the abdomen. Numerous adhesions of the intestines to the peritoneum. The peritoneum red and marbled ; its texture thickened, and its surface covered with a layer of coagulable lymph, which could be easily torn off. Some portions of the omentum were thick, fleshy and red. The intestines, adherent by means of a thick layer of coagulable lymph, formed, as it were, one single mass.

The mesentery was red and much increased in thickness,—equal in some places to the fleshy portion of the diaphragm. The surface was also covered with coagulable lymph. The mucous membrane of the ileum was highly inflamed for the extent of twenty inches, beginning at a foot from its termination in the cœcum. The increased vascularity was more observable on the valvulæ than in their intervals. In the inner surface of the sigmoid flexure, where it terminates in the rectum, there were many red blotches. The whole surface of this portion of the colon was of a light red colour. The right lobe of the liver was larger than natural; it was easily lacerated. The gall-bladder contained about two hundred calculi of a yellow colour, with angular surfaces, and very friable. The thoracic viscera were sound.

1743, Jane Ryan. This patient was far advanced in consumption, and died of colliquative diarrhœa.

1877, James Reilly. Died on the morning after he was admitted, and before I saw him.

2021, Hugh Reilly. Admitted on the 18th of November, on the 7th day of illness. Nov. 21, headach; eyes suffused; delirious for the last two days; great debility; skin covered with dun petechiæ, and jaundiced; tongue with a brown fur; much thirst; belly loose; tenderness in the right hypochondrium; cough; pulse 136. *Misturæ Sennæ*

*cum Camphora uncias sex, Finct. Opii Camphoratae drachmas. iii. m. Sumat unciam quartis horis. Vesicatorium inter Scapulas. Fov. crura.*

Oct. 22. Delirious all night; sleep at intervals; belly loose; some degree of tympany; urine and stools yellow; pulse 100. *Haustus Olei Ricini cum Oleo Terebinthinæ. Cont. Mist.*

Oct. 23. Stools more natural. Abdomen less swelled. Pulse 92. *Cont. Mistura.*

Oct. 24. Violently delirious all night. Urine and stools less yellow.

Oct. 25. Became suddenly worse last night. Fell into a state of stupor and insensibility. *Bolus e Calomelane. Vesicatorii Suris. Vini. 3vi. Mist. Camph. Unciam, Sp. Æth. Oleosi. gutt. xv. 4tis horis.*

Oct. 28. Death in the evening of the 27th.

DISSECTION.—The liver small, especially the right lobe; it was studded with small brown tubercles, hard in substance, and of a dirty brown colour. There was a small quantity of black bile in the gall bladder. The stomach was small, contracted, and nearly empty. The contents of the duodenum and a great part of the jejunum were of a deep yellowish brown; then they became of a bright yellow; brown again at the end of the ileum, and lastly, of a dark brown

in the colon, and consistent, and towards the rectum almost black. The spleen four times its natural size. All the veins in the abdomen were large. The heart and lungs were sound. There was a greater degree of vascularity than natural on the surface of the brain, and some aqueous effusion between the arachnoid and pia mater: these membranes were found thicker, more firm and opaque than in their sound state. A small quantity of blood was effused into the ventricles, the sides of which were very vascular.

2055, Anne Keane, admitted on the 20th Nov. on the 7th day of her illness. Nov. 21st, severe headach, ringing in her ears; much debility and febrile anxiety. Epigastrium very tender; tongue covered with a dry brown crust, great thirst; belly regular; stools, urine, and skin of a deep yellow; skin hot; severe general pains. *Abradantur Capilli. Hirudines octo Epigastrio. Solutio sulphatis Magnesiae in infuso rosæ.*

Dec. 1st. She became delirious on the morning of the 30th of November, and continued so till evening, when she fell into a state of insensibility. She sweated profusely in the night; the sweat was neither cold nor clammy, and there was no previous tremor. She died this morning. Previous to the 30th no symptom occurred which indicated immediate danger, but she was in a state of great debility. The nurse of the ward, volunteering an opinion, said, that "she died in the cool, not having strength to throw it out."



**Dissection.** The viscera of the abdomen appeared sound; the biliary ducts were very large; the stomach contained a greenish yellow fluid, which was curdled; that in the duodenum was more viscid, and of a deep orange colour; the fluid contents were of a bright yellow colour in the jejunum, at the termination of which they approached in colour to bile; the contents of the large intestines were of a dark brown; the yellow fluid in the small intestines tinged water like bile. The mucous surface of the stomach was unusually vascular; it was of a dusky red colour, and mottled appearance, particularly in the left extremity and small curvature, but in dissecting off the membrane it did not appear thickened or otherwise diseased; the liver was soft and flabby, not of its usual firm and brittle texture; the gall bladder contained very fluid bile. There was increased vascularity of the surface of the brain: the veins being turgid and dark, the small vessels much injected and florid; there was a considerable quantity of serum under the arachnoid, which, with the pia mater, was thickened, firm and opaque. A section of the cerebral substance presented a considerable number of bloody dots. The ventricles were filled with serum, but not enlarged. There was no unusual vascularity of their sides, the plexus choroides was pale and small.

2059, Elizabeth Hearne, Nov. 22. Eleventh day of fever. In a state of violent delirium: hallucinations; Did not answer questions; subsultus tendinum. She sweated profusely last night after a rigor; more

quiet since. Bowels free, P. 132. *Mist. sennæ cum camphora & Tinct. opii camphoratæ.*

Nov. 23. Bowels confined; more composed; raved at times, but was not violent; slept a good deal; she was in general insensible. She sweated profusely last night. Pulse indistinct and irregular; subsultus; tremor. *Bolus Calomelanos. Vini* ʒiv.

Nov. 24. One involuntary motion; delirious and violent all night. On the evening of the 23d, affected with rigor, which still continues; debility. *Vesicatorium capiti. Cont. Mist.*

Nov 25. Death.

DISSECTION. This woman was of low stature, thin and emaciated. The surface of the brain was florid and very vascular. There were large red patches on the sides of the hemispheres, which arose from effusion of blood under the pia mater. The section of the brain presented a number of red spots, some of them very large. The ventricles contained a small quantity of serum, which was tinged with blood.

The viscera of the thorax and abdomen were healthy.

2215. Edward Martin. This boy's was a case not of fever, but of dysentery, which resisted all the usual remedies.

2216, Philip Mills, Dec. 4. Tenth day of illness. Two stools. Severe headach, redness and suffusion of the eyes, anxiety and wildness of expression; low muttering delirium. Pulse 60. There came out dun petechiæ on the 3d Dec, on which day also the low delirium was first observed, and his thirst abated. Tongue moist, with a thick white fur. *Vesicat. capiti. Fov. crura. Bolus calomelanos cum opio, 6tis horis.*

Dec. 5th. Two stools; supine; in a state of stupor; livid cadaverous complexion; great debility. Tongue dry, brown, and with difficulty protruded. The petechiæ had spread; they were purple, and very thick on the back. Pulse not more than 80, indistinct, very weak; subsultus, *Cont. Boli & Vinum.*

Dec. 6. Involuntary stools. Muttering delirium; tremulous motion of the mouth. Convulsive twitchings of the eyelids; cold clammy sweat. Tongue and lips covered with black sordes. *Vesicatoria suris, Cont.*

Dec. 7. Death,

2295. Arthur Magee, Dec. 7. Seventh day of his illness. Oppression of breathing, pain in the chest, cough. *Mitt. Sang. Vesicatorium inter scapulas. Pilula calomelanos cum ipecacuanha.*

Dec. 9. Bilious vomiting; nausea; very bad

taste ; abdomen tender on pressure. Tongue covered with a thick white fur. *Hirudines* viii. *Epi-gastrio*. *Vesicatorium circa umbilicum*. *Tart. sodæ* & *Kali* ʒi. *4tis horis, e cyatho juris*.

Dec. 10. Bowels free. Bitter taste, nausea and bilious vomiting ; hiccup ; skin of a yellow tinge ; great prostration ; stupor, with expressions of febrile anxiety ; some pain in the chest ; slight cough. *Vini* ʒiv. *Pil. opii cum calomelane*.

Dec. 12. Pulse 98. The vomiting and hiccup had ceased. Slept well ; feels stronger ; complained of pain about the ensiform cartilage and a sense of suffocation ; severe cough with expectoration.

Dec. 13. Great debility ; cough ; slept well ; P. 110. *Vini* ʒiv. *Mist. Camph. cum Tinct. opii Camph. Oranges*.

Dec. 13. Bowels confined. Pulse 98. Cough. Debility was not increasing. Tongue covered with dry brown fur ; gums black. *Vesicatorium Pectori, Bolus e Calomelane*. *℞. Decocti senekæ* ʒvi. *Tinct. opii camphoratae* ʒiii *Sacch.* ʒii. s. ʒi. *4tis horis. Cont. alia*.

Dec. 16. Bowels confined ; slept well ; complained much of the cough, which came on by paroxysms, and was attended with expectoration ; insufferable taste ; tongue moister ; gums and lips covered with sordes ; slept well, and was rather

gaining strength. *Rep. Bolus. Enema vesperi.*  
*Vini zviij. Cont. Mist.*

Dec. 17. Slept ill; large involuntary stools; much weaker; cadaverous expression; pulse 112, small; cough, &c. *Mist. Cretæ zvjss. Tincturæ opii 3i. Vini Ipecac. ziii. m. 3ss. post sedes liqs.*

Dec. 18. The Diarrhœa had ceased; felt strong, and slept well. *Cont. Vinum. Pulv. Ipec. comp. gr. viii. h. s.*

Dec. 19. Two involuntary stools; vomited his food this morning; less expectoration; tongue brown and dry. P. 116. *Cont.*

Dec. 20. Pulse indistinct. resp. 46; extreme weakness.

Died in the night.

DISSECTION. Fluid under the dura mater; arachnoid thickened and opaque: under it an effusion of a yellowish serous fluid; increase of vascularity of the pia mater. On removing the brain there issued a considerable quantity of serum from the spinal canal. A reddish fluid which seemed a mixture of mucus and pus escaped on cutting into the substance of the lungs; the cellular structure of the lungs was filled with a serous fluid. Gall-bladder distended with dark bile; a considerable increase of vascularity of the mucous coat of the stomach,—the vessels arborescent;

the mucous follicles were enlarged, the membrane was covered with a viscid gelatinous substance; no disease discoverable in the mucous membrane of the intestines.

2631. Eliza Willis. Dec. 21. Fifth day of her illness. Bowels free; P. 128; tongue white; some epigastric tenderness; headach; sighing. *Mixtura Salina effervescens*.

Dec. 30. Several stools, with abdominal tenderness. *V. S. ad 3viii.*

Dec. 31. Four stools; P. quick; tongue white; skin hot; no tenderness of abdomen. *℞ Mixtura Cretæ 3vss. Tinct. Opii. 3i. Vini Ipecac. 3iii. m. s. 3ss. post. sedes liquidas.*

Jan. 2. Stools bloody; debility; pulse small and quick, respiration hurried. *V. S. ad. 3x. Pulv. Ipec. Comp. gr. x. sextis horis.*

Jan. 3. Many bloody stools; abdominal tenderness; respiration laborious; voice hoarse; P. small and indistinct. *Cont. Pulv. Ipec. Comp.*

Jan. 4. Death.

DISSECTION. A great quantity of serous effusion beneath the arachnoid, separating the membranes; the arachnoid very strong and opaque. The mucous membrane of the stomach pulpy and of an

uniform bright red colour. The mucous membrane of the small intestines exhibited the same appearances.

2763. Anne Mooney, Dec. 29. Ninth day of her fever; great headach; deafness; tongue white and moist; severe cough and hoarseness. *Vesicatorium sterno. Abradantur Capilli. Fov. Crura. Pihile Ipecac. cum Calomelane.*

Dec. 30. Several stools; cough easier; flushing. *Mistura Mucilag.*

Jan. 1818. Four motions; deafness continues with headach; P. 140; flushing; hoarse voice. Tongue white and moist. *Mitt. Sang. ex Art Temp. ad 3vi. Vesicatorium Nuchæ. Fov. Crura. Cont. Pil.*

Jan. 2. Resp. 36, laborious; some cough; bowels free; P. small and indistinct.

Jan. 3. death.

DISSECTION. The dura mater was very adherent to the bone, and vascular on its outer surface. Extravasations of blood observable on several portions of the pia mater; its vessels were large and numerous; much serous effusion under the arachnoid, which was thick, opaque, and strong. The substance of the brain was uncommonly tough,

1192, Eliza Dempsey ; and,

1415, Thomas Evans. These patients both died in a few hours after they were admitted into the Hospital.

After the foregoing pages were written, it occurred to me that the morbid anatomy of this great epidemic might be rendered still more complete. I therefore obtained a copy of most of the dissections which were made in our Hospital, together with the cases, and I requested Mr. Crawford to reduce the whole to a tabular form, which he has done, with his characteristic accuracy and ability.

Judging from the following Table, it will appear that icteroid fever was more frequent than was actually the case, and hence, it is necessary to observe that, at my request, every opportunity was taken of examining the bodies of such patients as became jaundiced in the course of their illness.

\* \* \* By H. which the reader will observe in many of the spaces, it is meant to intimate that the viscera had a healthy appearance.



## TORSID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
Ross, (Joseph) et. 45.	1817 Oct. 14, on the 12th day of his illness.	Severe general pains in the loins, which gradually subsided; very little headache; delirium and coma set in on the tenth day, and on the eleventh tremors, subultus and incoherence.	Considerable serous effusion under the arachnoid; some in the ventricles. Thickening and opacity of the arachnoid; inflammation of the pia mater; increased vascularity of the whole brain.	H.	H.	Had been in the habit of using spirituous liquors to excess.
Kelly, (Michael) et. 2.	Oct. 1 on the 16th day.	On the sixth day, severe headache, shuddering, epigastric tenderness, laboured breathing; rigid pete- chils on the 8th. The headache continued till the 10th; on the 12th the month- very sore; great prostration of strength, stupor.	Under the arachnoid on each side of the hemispheres a thin layer of fluid blood, which could be moved by pressure; also under the arachnoid on the anterior lobes of the hemisphere a gelatinous effusion; the pia mater somewhat increased in vascularity; two ounces of fluid in the ventricles. Fullness of the brain.	H.	Mucous membrane of the stomach and right portion of the small intestine of the color of a uniform bluish red; several small granular eminences of the same appearance.	This boy died under the influence of haemorrhage.
Ellis, (Betty) et. 50.	Nov. 28.	When admitted, in a state of stupor and insensibility; some delirium in the night; eyes very red and suffused; her breathing of the chest was very feeble; she made no complaint; extreme debility; thickly covered with purple pustules; died two days after her admission.	Increased vascularity of the surface of the brain; veins very turgid; some effusion in the ventricles and under the arachnoid; that membrane thickened, opaque, and firm; the vessels on the sides of the ventricles large and dilated.	H.	H.	

Brennan, (Nancy)	Nov. 30, on the 20th day.	Seized at first with rigor, pain in the back, loss of sleep and of appetite, and occasional delirium; was not confined to bed during the first week of her illness. The delirium ceased; numerous patches of local redness to a state of high inflammation; a large red wheal arose from the epigastrium, and spread over the epigastrium, and the lower part of the neck by coaction; face highly flushed, tongue with a thick black fur; vesicles on the teeth; profuse general sweats; she continued frigid and her strength gradually sunk.	High degree of vascularity of the surface of the brain; veins loaded with blood, small arteries very minutely injected; numerous patches of local redness; a large red wheal arose from the epigastrium, and spread over the epigastrium, and the lower part of the neck by coaction; face highly flushed, tongue with a thick black fur; vesicles on the teeth; profuse general sweats; she continued frigid and her strength gradually sunk.	H.	H.	A year before this illness she had been maniacal for six months; naturally of a passionate temper.
Robb, (John) at 45.	Dec. 4, on the 13th or 14th day.	During the first days of illness a great deal of sweat poured out without any sensation. On the 6th day the rigors gradually subsided, and the temperature increased. On the 13th or 14th day a great aggravation of all the symptoms, anæsthesia and death.	The ventricles filled with serous fluid; a great quantity of serum under the arachnoid, and beneath the convoluted membrane of the brain. The arachnoid thickened and opaque, the veins very turgid.	Effusion of serum in the right side of the chest; the pleura on that side highly inflamed; its thickness increased by the deposition of coagulable lymph forming a new membrane and numerous adhesions. The mucous coat of the trachea and bronchia of a deep red colour. Increased vascularity of both lungs, and considerable interstitial effusion. A great number of small abscesses in the left lung.	The spleen unusually soft.	Had been in the habit of using spirituous liquors in excess.
A. B. at 16.	Dec. 6, on the 24th day.	At the beginning of the illness headache, stupor, considerable purpura fluating; very great tenderness of the epigastrium on pressure; fullness of the abdomen, pulse rapid and weak, much prostration of strength. Pain in the epigastric region was the most urgent symptom, and continued almost to the last.	Serum effused under the arachnoid and into the ventricles; the vessels of the brain unusually loaded with blood.	H.	The external superior surface of the stomach of a bright red; that of the duodenum darker than usual and more vascular. The internal surface of the stomach smeared over with a dark brown tenacious matter; the mucous membrane very red, covered with numerous small red dots and patches; sensibly thickened, and its vascularity increased; the mucous coat partook of these appearances; the internal surface of the duodenum of a brick red colour, covered with a chocolate-coloured fluid tinged with blood; its coat thickened.	An idiot, and of a phlegmatic temperament.

## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
Boyle, (John) et. 50.	1817 Dec. 13.	Considerable degree of stupor, breathing laboured, heaving; epigastrium extremely tender on pressure; countenance of a livid colour, pulse indistinct, tongue rough and dry, could give no account of himself. Died on the day of admission.	Veins distended with blood, water in the ventricles and under the arachnoid; the meninges were thick and opaque.	Lungs unusually vascular, a considerable quantity of serous fluid effused into their substance; the mucous membrane inflamed, the bronchial tubes filled with mucus.	The mucous membrane lining the left extremity of the stomach inflamed; the liver soft and fatty.	
Carroll, (Margaret) et. 15.	Dec. 29, on the 12th day.	Much headache from the beginning, succeeded by stupor; great tenderness in the epigastric region, which was attended at first with nausea and vomiting, and continued until the day before her death; considerable debility and febrile anxiety throughout; strabismus twelve hours before death.	Some water effused under the arachnoid and in small quantity into the ventricles; a few patches of extravasation of blood in the pia mater, the arachnoid firm and thickened.	H.	General blush of a bright red on the internal surface of the stomach, principally at the great extremity, numerous red dots, some very large, increased thickness of the mucous coat; the same appearances in the duodenum where the mucous follicles appeared considerably enlarged.	
Nevin, (Mary) et. 60.	1818 Jan. 5, on the 11th day.	Difficult breathing, cough, epigastric tenderness, hurried language, and pulse a little increased in frequency, were the chief symptoms of the epigastric tenderness subsided on the fourth day, but the dyspnoea and cough continued and soon became aggravated.	Substance of the brain unusually firm, considerable increase of vascularity of the pia mater, a few red patches on the surface of the arachnoid, thickening and opacity of the arachnoid, a small quantity of serous fluid in the sac of that membrane, and some between the convolutions.	H.	H.	

Corrél, (Maurice) æt. 32.	Jan. 11, on the 5th day.	Some headach at first, soon followed by the most violent delirium; in the sac of the arachnoid, the constant raving, incoherent replies, pia mater on the cerebellum some flushing, eyes suffused, pulse considerably thickened by ex- rapid and weak. On the seventh day numerous dun coloured and large petechiæ appeared, and the skin became cool. On the eighth day he seemed rather better, and on the ninth, after a violent return of delirium, he suddenly fell into an apoplectic state and died.	Not examined.	Not examined.	
Hogan, (Edward) æt. 24.	Jan. 18, on the 7th day.	The illness began with severe headach and cough, flushing of the face, increased heat, very frequent pulse; on the headach being relieved, considerable stupor ensued, the cough continued severe, but without much dyspnoea; great prostration of strength took place, then coma and death.	Numerous firm adhesions between the pleura, the lungs sound in their external appearance, but their texture rather firm; stuffed with a considerable quantity of blood and serum, and interspersed with numerous small indurated black points resembling tubercles, & a few points of suppuration; the mucous membrane inflamed; one abscess full of acropul- nous creamy matter, containing a few small pieces of the outer and upper end of the sternum into the thorax, outside the pleura costalis.	H	He was of a slender delicate make, his neck and chest covered with acropululous ulcers.
Yale, (Thomas) æt. 56.	Jan. 18,	Relapse of fever attended with dysentery; tongue brown, excessive thirst, skin yellow, numerous black stools, great anxiety and despondency, very frequent pulse, subsiding at intervals, and considerable prostration of strength; twenty-four hours after admission, when breathing and coma took place.	Considerable serous effusion both in the sac of the arachnoid and under that membrane, between the convolutions of the brain; the ventricles filled with water to distension, the arachnoid thickened to a considerable degree, and outside the pia mater, pleura choroides, and substance of the brain of a pale colour.	H	An old sailor with a broken constitution.

## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
Magrath, (Nancy) æt. 53.	1818, Jan. 28 on the 116 day.	Considerable dyspnea and cough, with slight headach in the begin- ning, all which had been relieved, and she was getting better, when on the tenth day a slight return of headach with delirium and painful swelling of the left parotid took place, the skin became yellow, tongue brown and dry, pulse very weak with great debility; on the 11th, skin of a dark yellow; low de- lirium, moaning, pulse slow and weak, coma and death.	Some water under the archi- noid, thickening and opacity of this membrane, a little serous fluid in the ventricles, cerebral substance very firm	Pericardium adhering firmly to the heart; strong cohesion be- tween the pleurae, both these alterations apparently of old date.	Liver small, of a dark red co- lour and irregular surface, healthy in its structure, gall bladder small, containing a small quantity of brown bile, and two large rough yellow gra- nulated calculi; one wedged in the neck of the bladder so as to obstruct the opening into the duct; the ducts larger than usual; inner coat of the stomach much of a deep red and highly vascular, the small intestine loaded with venous blood, their mucous coat of a deep purple, both the stomach and intestines contained a red mucous matter.	
Lalor (Margaret) æt. 40.	Feb. 5, on the 9th day.	At the beginning, headach, en- teric tenderness, pain in the sto- mach and oppressed breathing; a greater quantity between the on the 7th day no pain, but much debility and anxiety; died on the 9th unexpectedly, having fallen into a comatose state.	A small quantity of water in the sac of the arachnoid; a greater quantity between the convolutions of the brain, and the ventricles; the arachnoid thickened and opaque.	H.	H.	
Curtis (Catharine) æt. 32.	Feb. 11, on the 15th day.	This woman miscarried in the course of her fever, which at first was attended with moderate sym- ptoms. She was five months preg- nant. The day following the mis- carriage, she suddenly fell into a comatose state, and continued so until her death, which took place four days after.	The veins on the surface of the brain rather more turbid than in the healthy state; the ventricles contained 4 oz. of a turbid yellowish white serum, and a quantity of bright pea green matter, heavy, sinking in water, lay in the bottom; their cavities were much enlarged, and their sides covered with a reddish, soft, pulpy matter.	Lungs slightly adherent to the sides of the thorax; much serum effused into their sub- stance.	The uterus was as large as a closed fist and soft; its vessels very large.	

<p>Sear, (Catharine) et. 18.</p> <p>Feb. 11, on the 21st day.</p>	<p>In a state of violent delirium, when admitted on the 8th day of illness; no account of her actual condition could be got from her; continued in this state with very little alteration until her death, seemed rather more sensible, and took some food on the 11th; stools black, fetid, and passed involuntarily; on the 14th and 15th convulsions, soon followed by great debility, stupor, tremor and coma.</p>	<p>The surface of the arachnoid rather dry; veins slightly turgid; ventricles of natural size and appearance, containing about three ounces of bloody serum; dura mater firmly adherent to the bone.</p>	<p>Pericardium adherent to the heart at its anterior part, at the superior part of the right ventricle, and at its junction with the auricle; the adhesions could be easily torn.</p>	<p>Surface of the peritoneum very dry, small intestines of a dark colour, loaded with venous blood, empty and contracted.</p>
<p>Magee, (Michael) et. 60.</p> <p>Feb. 13, on the 18th day.</p>	<p>Entire abdomen, particularly the right hypochondrium extremely tender on pressure; surface of the body and the eyes of a yellowish hue, great prostration of strength, restlessness and moaning, pulse feeble and indistinct, tongue black.</p>	<p>Not examined.</p>	<p>Not examined.</p>	<p>Surface of the liver coated with lymph; its membrane opaque and thickened; its substance apparently healthy; eight calculi in the gall bladder, and a quantity of thickropy bile; the duct pervious; mucous coat of the stomach covered with a thick darkish granular, numerous white, scattered, a number of red spots something like petechiae, intestines all glued together by recently exuded lymph.</p>
<p>Fagan, (Matthew) et. 20.</p> <p>Feb. 20, on the 18th day.</p>	<p>Admitted on the 16th day of illness, in a state of stupor and insensibility; occasional violent delirium, black stools; rather more sensible on the 17th, but on the 18th became comatose and died.</p>	<p>Vessels on the surface of the brain turgid; a great quantity of water effused under the arachnoid; the pia mater at the base of the brain inflamed and much thickened; a small quantity of serum tinged with blood in the ventricles; the plexus choroides and vascular system of the brain unusually loaded with blood; the cerebral substance very firm.</p>	<p>Not examined.</p>	<p>Not examined.</p>

## MORBID APPEARANCES AFTER DEATH.

AME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
Boyle (Margaret) æt. 20.	1818, Feb. 23, on the 8th day.	The fever set in with very severe headach; dyspnoea, cough, and tenderness of the epigastrium; on the 7th day headach relieved, less dyspnoea and cough, but excessive tenderness of the epigastrium and hypochondria and pain in these re- gions; skin yellow; great anxiety and prostration of strength. In the evening, and during the night, delirium and convulsions; and on the 8th, the skin acquired a dark brownish yellow colour. She was constantly moaning and at last became comatose.	Some serum of a brownish yellow seen from the convolu- tions of the brain and in the ventricles.	H.	Liver large, much rounded on its surface, tough, and pushing up the diaphragm so as to lessen the dimensions of the chest. All the natural en- doses more prominent than usual; the whole occupied by small tubercles of a brick red colour, of oval shape, and the size of a large pea, closely com- pacted, leaving no intermediate sound liver; the ductus com- munis permeable, but sur- rounded by an enlarged indur- ated pancreas and enlarged lymphatic glands. The spleen enlarged, filled with small white tubercles, the size of pin heads. Some spots of ex- travasation in the course of the large vessels of the liver sur- face of the stomach.	This girl was of a dark complexion and full habit, and had undergone a great deal of hardship and ill-treatment, pec- uliar to her illness.
Macdonogh, (James) æt. 16.	March 7, on the 30th day.	At first, headach, some stupor; great thirst, hot skin, and very fre- quent pulse; on the 6th or 7th day he became jaundiced; faeces white, urine of a deep yellow, tongue a thick clammy fur. The fever by de- grees abated, but the jaundice re- mained; there was a slight tempo- rary amendment in his state, but at last the abdomen became tender and swelled, his strength sunk, and he died.	Slight serous effusion under the arachnoid and in the ven- tricles.	Strong adhesions between the pleurae.	Contained about half a gallon of yellowish brown fluid; on the inner surface of the stomach a number of large circumscribed red blotches; a very large ab- scess in the liver, surrounding the vena portae and other ves- sels at their entrance into the viscus.	

Law, (Margaret) et. 20.	March 10, on the 6th day.	The first symptoms were severe headach, muscæ volitantes; consi- derable epigastric tenderness; con- stant vomiting of every thing the took; a thick grey fur on the tongue, pulse frequent and small; these symp- toms continued increasing in seve- rity; on the 4th day tongue brown, and green at the tip; stools green; on the 5th day prostration of strength, and on the 6th stupor and coma.	The base of the cerebellum universally overspread with a thin layer of black blood effu- sion between the arachnoid and pia mater, the same appear- ance along the course of the falx, and also on a large por- tion of the left hemisphere, and a smaller portion laterally and posteriorly of the right; upper parts of the anterior lobes more vascular than natural, vessels of the corpus callosum distended and tortuous; gradual in- crease of vascularity of the spi- nal cord, beginning at the upper third, and extending down- wards, and numerous large vessels running along the cau- da equina.	H.	One or two spots of ecchymo- sis on the internal surface of the stomach.	This girl was a nurse, and immediately be- fore being taken ill she had undergone great fatigue by sitting up for several nights suc- cessively with a pa- tient who died of fe- ver.
Furel, (Thomas) et. 50.	March 10, on the 21st day.	Severe cough, copious expectora- tion tinged with blood, labour- ing, and bloody stools; tremor, faintness, a degree of stupor, raving and moaning, and frequent and feeble, prostration of strength, in- voluntary stools.	Veins on the surface of the brain turgid, slight serous effu- sion under the arachnoid.	H.		Subject for many years to a distressing asthma.
Carney, (Edward) et. 50.	March 11, on the 10th or 11th day.	First affected with headach, which soon subsided; black tongue, pale conjunctivæ and deafness; for se- veral days the pulse moderate; on the 7th or 8th day delirium, tre- mor, much prostration of strength, tongue with a black crust; the next day violent delirium, eyes suffused with blood, face, sun pitechie; the day after, stupor, subultus, twitching, black stools, muttering delirium.	Some serous fluid in the sac of the arachnoid, a considerable quantity between the convolu- tions of the brain separating them widely from each other; a little in the ventricles.	H.	The internal surface of the stomach covered with nume- rous red spots; that of the large intestines of a dark red colour, and its vascularity increased.	



## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
McGlinn, (Mary) æt. 20.	1818, March 17, on the 9th day.	Headach, cough, dyspnoea and mucous expectoration; died suddenly on the third day after admission, complaining of soreness and burning at her heart.	H.	The lungs in part quite solid and attached by very firm connexions to the pleura costalis.	H.	
Proctor, (Michael) æt. 45.	March 22, on the 16th day.	On the 5th day headach; on the 8th day, succeeded by raving, delirium, and universal tremors; immediately previous to death, subsultus, low muttering delirium.	H.	Adhesion of the pleurae.	H.	His wife (who died also) and children were in the hospital at the same time, which circumstance preyed constantly on his mind.
Byrne, (John) æt. 35.	March 25, on the 11th day.	Delirium ferox, flushing, redness of the eyes, mouth and tongue black and parched, pulse frequent and feeble, petechiae.	The surface of the pia mater entirely covered with minute red vessels, and presenting patches of extravasated blood. Brain very firm, numerous bloody dots appeared on cutting into it; between two and three ounces of serous fluid in the lateral ventricles.	H.	H.	
Cotter, (Charles) æt. 50.	April 1, on the 15th day.	First affected with headach, epigastric tenderness, general pains and frequent rigors; free from fever on the eighth day; relapsed on the tenth with headach, severe general pains, rigor lasting all day followed by constant rigors, profuse profusion of sweat, irregular frequent pulse; on the 13th became very yellow in a few hours; deeply jaundiced on the 15th, pulse slow and irregular, involuntary evacuations, extreme debility.	Slight effusion into the sac of the arachnoid, in greater quantity under the membrane, and a small quantity of water in the ventricles; the arachnoid thickened and opaque.	H.	The cystic duct completely obstructed by two or three small calculi; the gall bladder filled with a thick dark coloured bile.	

<p>Rephery, (Catharine) æt. 16.</p> <p>April 7, on the 15th day.</p>	<p>Headach and epigastric tenderness at the beginning; after a few days a degree of stupor and debility, which went on increasing until death. She was without any very distinct local affection.</p>	<p>A considerable quantity of fluid in the ventricles, which were enlarged; slight effusion under the arachnoid.</p>	<p>A small quantity of red fluid in both sides of the chest, and more fluid than usual in the pericardium; old adhesions between the pleure, increased vacuity of the right lung, gus, and there the membrane interstitial effusion in the left.</p>	<p>The mucous coat of the stomach presented a general blush of red, and was covered with numerous red dots; the redness greater near the œsophagus, she laboured under depression.</p>	<p>This was a relapse; it appeared the girl had been very ill treated by her relations, and she laboured under mental depression.</p>
<p>Murray, (Thomas) æt. 35.</p> <p>April 9, on the 26th day.</p>	<p>Seized at first with rigor, pain in the right arm and cough, but no headach. When attacked on the 15th day of illness, considerable delirium, face flushed, eyes suffused, slight cough. A few days after severe dyspnea, wheezing, hard cough; these symptoms subsiding, he continued better for some time, though greatly exhausted; was then affected with dysentery, on the subsidence of which he had a sudden return of the affection of the chest and died.</p>	<p>The ventricles filled with fluid; a large quantity effused between the convolutions of the brain, the arachnoid firmer than in health, and opaque.</p>	<p>A large abscess at the upper and posterior part of the right lung, occupying nearly one fourth of its substance; the rest of this lung greatly stuffed with blood.</p>	<p>Inflammation of a portion of the mucous coat of the sigmoid flexure of the colon.</p>	
<p>Kane, (James) æt. 20.</p> <p>May 5, on the 14th day.</p>	<p>Some headach in the beginning, with furred tongue, and little febrile action, the temperature remaining natural; but the eyes soon became dull and inflamed, and the countenance muddy; the pulse sunk, the extremities became cold, and he died in a state of stupor.</p>	<p>The arachnoid raised from the pia mater by a considerable quantity of serous fluid; the pia mater unusually vascular, and in some places smeared over with blood; a considerable quantity of serous fluid in the ventricles, the substance of the brain very firm, and its vascularity increased.</p>	H.	H.	

## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
M <sup>r</sup> Gurr, (Mary) æt. 23.	1813 May 6, on the 17th day.	At the beginning severe headache and some cough; on the seventh day, most violent delirium, brown tongue, sordes on the teeth, dark stools, numerous petechæ; for several days the delirium very high, pulse 140, great debility, rigid involuntary stools, cold feet, general emaciation on the 11th; but the fever; she had a remission of fever without sweat succeeded by stupor, constant moaning, and coma.	The ventricles completely filled with fluid; a moderate quantity under the arachnoid, a great deal of serum in the base of the brain after the brain was taken out.	General adhesions between the pleurae of old origin.	Liver enlarged, its anterior edge thick and round.	
Gill, (Daniel) æt. 50.	May 10, on the 11th day.	Headach, stupor, dyspnoea and cough, right hydropneumothorax, and still the same on the 11th day. On the 11th day she died, breathing more oppressed, and heaving by degrees into a comatose state, once observed whenever a similar effusion existed.	Serous effusion in moderate quantity under the arachnoid; this membrane opaque, the fluid under it had the appearance of a jelly (this appeared once observed whenever a similar effusion existed).	The lungs very much stuffed with blood, their substance of a bright red, and containing a considerable quantity of reddish fluid.	The greatest portion of the inner surface of the stomach of a bright red, covered with a number of dots and patches of a deeper colour; the vessels of the mucous coat minutely injected, presenting an arborescent appearance; the rest of this surface of a dark muddy colour, covered with a thick tenacious matter; the duodenum presented the same appearances. Liver very soft and flabby, its investing membrane easily torn off.	This man's constitution worn out by age, disease, and poverty. He had been afflicted with a liver complaint about the end of 1816.
Tracy, (Edward) æt. 58.	May 10, on the 11th day.	Severe headach, much dyspnoea and cough at the beginning; the former went off, but the two latter symptoms considerably increased; there was purulent expectoration, much wheezing, brown and dry tongue, pulse 130, weak, great debility and emaciation; the dyspnoea increased, and the pulse fell to 70 before death.	A small quantity of serous effusion under the arachnoid.	Increased vascularity of the mucous membrane of the larynx and tracheæ; the same appearance in the bronchial tubes, which were lined with a rosy grey coloured matter; some portions of the lungs stuffed with blood; they did not collapse on opening the thorax.		This man always subject to catarrhal attacks with dyspnoea, had used a great deal of mercury for syphilis, and was covered with copper coloured blotches; and came from the Lock Hospital where he had been lying two months.

McKeon, (Mary) et. 24.	May 29, on the 14th day.	Slight headache in the beginning; during the first nine or ten days the fever combined with dysmeny; severe pain in the upper region of the abdomen, and excessive tenderness on pressure, tongue brown and dry, yellow skin, great anxiety, sinking and debility; general relief given the 10th or 11th day; after which with dysmeny and cough, strength failed, appeared to occasion her death; pulse 48, and breathings eight in a minute for at least twenty-four hours before death.	Very slight effusion under the arachnoid, and in the ventricles.	The lungs did not collapse, were rather firmer than usual, containing a very considerable quantity of serous fluid mixed with purulent mucus; the bronchial membrane highly inflamed; the tubes filled with a viscid frothy yellow matter.	H.
Downey, (Mary) et. 50.	June 12, on the 17th day.	Difficulty of breathing, cough, expectoration, and severe dysmenic symptoms from the beginning. During the four or five days preceding death she passed by stool a small quantity of dark blood. She had a brown and dry tongue, bad taste, excessive thirst, severe headache and great anxiety.	Slight effusion under the arachnoid and into the ventricles; the arachnoid a little thickened and opaque.	Firm adhesions between the pleurae; considerable serous effusion into the cellular substance of the lungs, and a few vessels loaded with blood; a few tubercles, black, hard and gritty; the bronchial tubes and trachea stuffed with a thick, yellow viscid mucus; their lining membrane of a dark red; numerous adhesions, white, firm and thready, between the heart and pericardium; the surface of the heart white and villous; spots of ossification in the semilunar valves, and in the aorta.	Mucous coat of the large intestines of a dusky brown colour; its thickness increased; its texture soft and pulpy, its surface in some parts rough; about a gallon of yellow serum in the abdomen.
					Subject to cough for two years before death.

## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
Lacy, (father)	1818, June 13th.	Could give no account of herself, when asked; constant moaning incoherent in her wiles, referred all her sufferings to the epigastrium, which was extremely tender on pressure, as well as both hypochondria; skin yellow, breathing laboured, frequent short cough, some wheezing, hiccup, and twitching of the mouth, tongue with a grey clammy fur, pulse weak and very frequent; died the day after admission.	A very small quantity of serous fluid in the ventricles and under the arachnoid; slight opacity of that tunic.	Firm adhesions between the pericardium and the heart; some interstitial effusion in the lungs.	The mucous coat of the stomach of a brick red, principally in the left extremity, and a number of stripes of a deeper red in the direction of the vessels and of the folds of the membrane; increased vascularity of the intestines; liver—pale livid colour, its anterior edge thickened; its membrane in some places opaque and thick; its surface irregular, some patches of a yellowish colour, more dense than the rest, and a few hard gritty spots interspersed throughout its substance; ducts permeable; gall bladder almost empty.	
Jones, (Jane) æt. 5.	June 21, on the 8th day.	When admitted, the body covered with numerous small petechiæ, of a dusky red, and a few spots of a larger size and darker colour; she was completely free from fever, and her health perfectly good; the petechiæ faded in the course of a fortnight, but she was shortly after seized with fever; at first headach, epigastric tenderness and hurried respiration; receding on the 4th day, exacerbation on the 5th, on the 6th much restlessness, pale countenance, black stools; on the 7th livid spots on the arms, left cheek, and particularly the nose; and particularly the nose; breathing hurried; on the 8th death.	H.	Slight effusion into the pericardium of a transparent fluid.	Congestion of blood in different portions of the mucous coat of the stomach, and its whole surface very similar to the skin, when covered with purpura, only that the spots were of a more vivid red.	H.

<p><b>Seamer,</b> (Thomas) æt. 25.</p>	<p>June 21, on the 15th day.</p>	<p>Had violent headache at the commencement, but on admission was in a state of stupor; eyes inflamed; countenance dark and muddy; tongue dry and brown; temperature of the body below the natural standard; lower extremities very cold; pulse almost imperceptible; stools dark and passed involuntarily.</p>	<p>Arachnoid firm and opaque; considerable quantity of serous fluid between that tunic and the pia mater; vessels of the pia mater minutely injected with blood; substance of the brain very firm, and an unusual number of bloody points observable on cutting into it; a small quantity of fluid in the ventricles; plexus choroides remarkably pale.</p>	<p>H.</p>	<p>Cells of the colon very large, and filled with scybala; mucous coat of the descending colon, and particularly of the sigmoid flexure, having a dark inkly colour; its texture soft and easily separated from the muscular coat, the veins between them very minutely injected and distended with black blood, ramifying so as to present a fine retiform appearance (the same appearances observed in a greater or less degree in most cases where the stools were black and fetid.)</p>	
<p><b>Burke,</b> (Patrick) æt. 30.</p>	<p>June 22.</p>	<p>Died the day after admission; could give no account of himself; his body was of a dark livid hue; tongue black; feet cold; respiration hurried.</p>	<p>Very considerable effusion of an opaque serous fluid between the arachnoid and pia mater; ventricles filled with a clear fluid; the sinuses distended with dark blood, the vessels of the brain unusually turgid.</p>	<p>H.</p>		
<p><b>Duffy,</b> (Sarah) æt. 18.</p>	<p>June 27, on the 17th day.</p>	<p>The fever set in with severity; it was attended by cough, occasional dyspnoea, bad expression and colour of countenance, green and slimy stools, on the 7th day these relieved, fever abated; on the 8th and 9th chest again engaged; temperature of the body below the natural standard; feet cold and the pulse small, to the 10th day from the 10th to the 14th gradual amendment, but the stools continued green up to the 16th, when they appeared more normal; in the evening she refused her food; the lips became livid, and she died unexpectedly next morning.</p>	<p>Brain very soft, pale and pulpy; the surface presenting a jelly like appearance; slight serous effusion into the ventricles.</p>	<p>Slight bloody coloured effusion in either side of the chest; some effusion into the pericardium.</p>	<p>Liver pale, soft and flabby; gall-bladder distended with bile; the colon contained a considerable quantity of yellow lumpy faeces; kidneys soft and flabby.</p>	

## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
Reilly, (Mary) et. 45.	1818 June 26, on the 13th day.	General pains, great anxiety and depression of the spirits, with pungent heat; crisis by sweat on the 11th with much relief; on the 13th and 15th stupor, prostration of strength and coma.	Considerable serous effusion in the sac of the arachnoid and some between the convolutions, a small quantity of fluid in the ventricles, a great deal remained in the skull after the brain was taken out.	H.	H.	
Brown, (Sarah) et. 31.	July 4, on the 10th day.	Dyspnoea, cough, pain in the chest, headache, epigastric tenderness; all the symptoms relieved except the dyspnoea and cough, which continuing severe, her strength failed rapidly, and death soon took place.	Considerable effusion in the ventricles of the brain.	Numerous firm adhesions between the pleura, the right lung hard and heavy, sinking in water, the pleura of that lung slightly thickened.	Liver enlarged, investing membrane opaque in certain places, structure healthy.	
McCarthy, (Pat.) et. 27.	July 11, on the 14th day.	Had a first attack of fever attended with headache, considerable epigastric tenderness and occasional vomiting; convalescent on the 6th day, but three days after relapsed with some return of epigastric tenderness, this symptom soon subsided but was succeeded by considerable febrile anxiety, brown tongue, much tremor of the under jaws and of the hands, and he died on the 8th day after the relapse.	Very slight effusion under the arachnoid, globules of air under the pia mater.	About three ounces of fluid in either side of the chest, and four ounces in the pericardium, foramen ovale open.	A small quantity of serous fluid in the abdomen, the vessels of the mucous membrane in some parts of the ileum and large intestines presented an arborescent appearance.	

Seale, (Patrick) et. 15.	July 15, on the 3 8th day.	Had headach at the beginning, and on the 8th or 9th day became delirious; eyes suffused and red, face flushed, tongue a dark brown dry crust, sores on the teeth, bowels confined for seven days; the delirium continued until the 10th; he had a wild expression of countenance, dark crimson flushing of the cheeks, strabismus, floccu- lation, great prostration of strength; from the 16th to the 24th was ra- ther better, no longer delirious, slept well, p. 180—grew worse on the 25th, the delirium returned, the breathing became hur- ried, and his strength rapidly sunk.	Considerable effusion into the sac of the arachnoid; veins on the surface of the brain uni- formly increased in vascularity; about two ounces of serum fluid in the ventricles; a sec- tion of the medullary substance presented numerous bloody dots, a great deal of fluid re- mained in the skull after the brain was taken out, and on inverting the body a small quantity issued from the spinal canal.	About three ounces of fluid in the pericardium.	Great increase of vascularity in the mucous coat about the cardiac orifices of the stomach; the redness disposed in stripes according with the course of the vessels, the veins of the sto- mach very turgid. The mucous membrane of the small intes- tines slightly increased in vas- cularity in a few places; that of the large intestines, particu- larly towards their termination, of a dark brown, appearing to be occasioned by congestion of blood in the minute veins.	H.	H.	The mesentery was co- vered with numerous large blotches of a black colour and irregular shape, but circum- scribed, leaving the membrane between them perfectly healthy; they were more numerous in the course of the vessels, and consequently along the termi- nation of the mesentery at the intestines, but none were ob- served on the intestines; these blotches were occasioned by ex- trusion of venous blood into the cellular tissue connect- ing the layers of the mesentery; the membrane itself over them was slightly red and vascular; small clots of blood could be ex- pressed out of many of them; the stomach and intestinal canal healthy, their coats ra- ther paler than usual; a few similar blotches observed in the mediastinum and under the pleura costalis.	The brain being healthy in this case, was contrary to every reasonable expecta- tion.
A. B.	July 20,	In a comatose state when ad- mitted; skin of a deep yellow, ap- pearance of bruises on the arms and legs, as if from ligatures used to tie the patient down to the bed; pulse very feeble; died the next day.							



## MORBID APPEARANCES AFTER DEATH.

NAME.	Date of death and illness.	SYMPTOMS.	HEAD.	CHEST.	ABDOMEN.	REMARKS.
White, (Catharine) æt. 62.	1818, July 34, on the 30th day.	When admitted on the 8th day of illness she had general pains, excessive epigastric tenderness; some headache; on the 10th headache increased; epigastric tenderness great; some relief on the 11th; and continued better, complaining chiefly of weakness and general pains until the 18th, when there was aggravation of the pains, increase in anxiety and some stupor; on the 19th the pains were excruciating, especially in the feet, considerable epigastric tenderness, difficulty in swallowing and extreme debility.	A considerable quantity of bloody coloured fluid in the sac of the arachnoid, turgescence of the veins in the posterior lobes of the brain, a gelly like fluid effused between the arachnoid and pia mater, numerous bloody dots out of which blood could be expressed, were observed on making a section of the cerebral substance, a considerable quantity of sanguineous fluid was taken out.	Slight adhesion between the pleurae.	The mucous membrane of the stomach uniformly increased in vascularity and smeared over with a yellowish glairy substance; several portions of the small intestines appeared red externally, and there was an increase of vascularity in the corresponding portions of their mucous membrane.	
Allen, (Peter) æt. 30.	July 30, On the 10th day.	The chest was at first the part chiefly engaged, and his complaint appeared to be an acute catarrhal affection of the lungs; he had obtained considerable relief, when on the seventh day of illness headache succeeded by violent epigastric tenderness, prostration of strength and coma.	A small quantity of serous fluid effused into the sac of the arachnoid; a considerable quantity between the pia mater and arachnoid tunic, and some filling the ventricles; no morbid appearances observed in the spinal marrow.	H.	H.	

Prodie, William æt. 22.	August 7, On the 16th day.	Headach and sickness of stomach from the beginning; when admit- ted, on the 11th day of illness, there was still severe headach, nausea, and vomiting, and a which were in a state of ecchymosis, and pain in the eyes; also anxiety and depression of mind; brown dry conguis; hot skin; frequent pulse; on the 15th, referred his distress principally to the stomach; the eyes closed; great restlessness; on the 16th delirious and restless all night, and towards morning fell in- to a comatose state, with stertorous breathing, clenching of the fist, raising of the hand to his face, corners and subulcus; eyelids half closed, conjunctive protruding, power of deglutition almost lost.	On the lateral part of the right hemisphere of the brain were two large clots of blood, which penetrated deep into the me- dullary substance; the me- dullary substance surrounding each clot was in a state of soft jelly like matter, very al- most similar to rennet curd; the left ventricle contained a consider- able quantity of water, and its cavity was much enlarged; the left ventricle also full of water, but not distended. A consider- able quantity of clear fluid under the arachnoid mem- brane of the medulla spinalis throughout its whole extent.	Six ounces of fluid in the pericardium; left lung firmly adherent to the parietes of the chest.	The internal surface of the stomach round the cardiac or- ifice of a deep vermilion co- lour; general reticula, and in- creased vascularity of its mu- cous membrane, and numerous small dark spots of extravasated blood interspersed through- out.			Pregnant 8 months, had been subject to headach and epistaxis during her former pregnancies.
Millmore, Mary, æt. 28.	Aug. 24th. On the 25th day.	The head severely affected from the beginning of her illness; P. very frequent; tongue a brown fur; the headach, though a little relieved, continued to be the chief symptom of illness for many days; she at last became very restless and anxious, and fell into a state of stupor, soon followed by coma and stertor.	Great increase of vascu- larity in the pia mater; veins unusually turgid; about two ounces of fluid in the ventri- cles, and the same quantity in the basis of the cranium and in the sheath of the medulla spinalis.	Lungs stuffed with serum, and a few portions with lymph, especially the right superior lobe.	One or two opaque spots on the liver; intestines rather loaded with blood.			The first attack of fever was slight; he was an emaciated old man. The viscera of the thorax and abdo- men were remarkably sound.
Lanahan, (James) æt. 60.)	Aug. 14th. On the 2d day.	Released on the 4th day of con- valescence; on the day of release, ri- gor; hot skin; frequent small pulse; furred tongue; debility and tremor. On the 2d day, debility; anxiety; pungent heat; foul taste; deafness.—Evening, increas- ed anxiety; moaning, hurried, sus- pirious breathing; torpor; invol- untary stool; dark fecal dis- charge; sunken countenance; death at 11 o'clock.	Serous effusion under the arachnoid; about two ounces of colourless fluid in the ven- tricles; a small quantity of fluid in the sheath of the me- dulla spinalis.		H.	H.		

I shall now lay before the reader a table illustrative of the morbid sequelæ of the Epidemic fever. This table contains the names of those individuals who were admitted into the Whitworth Hospital, between the middle of April and middle of August, 1818, with their diseases, all of which arose during fever or during convalescence from fever. The cases were reported by Mr. Cumming, by whom this very satisfactory document was prepared at my request; several of the dissections were made by Mr. Phipps.

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I cannot conclude this paper without thanking the gentlemen who have been acting as clinical clerks to the Medical Hospitals of the House of Industry \* for the assistance which I have received from them during the past year; and I must add, that the ardour which they have shewn in the pursuit of knowledge is highly praise-worthy, their attention and kindness to the sick admirable. In the exercise of their duty, several of these gentlemen contracted fevers, and it deserves to be recorded, that they were scarcely recovered, when they resumed their occupation in the fever wards with renewed zeal.

\* Messrs. Macdowell, Crawford and Phipps, Dr. Marsh, and Mr. Cumming.

1818. Name, Age, and date of Admission.	DISEASE.	Period of attack.	State of health pre- vious to fever.	TERMINATION.		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.		
Steevenson, (Alicia) æt. 80. April 14th.	Dysentery.	During con- valescence.	Good.	May 15th. Relieved.			
Griffith, (David) æt. 12. April 14th.	Incipient Phtisis.	During fever.	Delicate; subject to dyspnoea.	May 23d. Cured.			Symptoms of pneumonia occurred during fever.
Moore, (Ellen) æt. 19. April 14th.	Cephalitis.	During fever.	Good.	June 15th. Cured.			In this girl, who had never menstru- ated, the headache was succeeded by a painful inflammatory swelling on the left tibia.
McCabe, (Maud) æt. 12. April 14.	Phtisis Pulmonalis.	During fever.	Catarrhal infection for eight months previous to fever.		May 9th.	Left cavity of the thorax contained 12 ounces of a sero-purulent fluid. Com- mencing tubercles in the lung of the same side; greatest portion of the right cavity occupied by a large vomica containing a pint of dark green field pus.	This patient could not lie on the left side. The attack of fever was com- bined with pneumonia; catamenia had been suppressed for six months.
Turner, (Anne) æt. 15. April 16th.	Hysteria Epilepsy.	During fever.	Pretty g. od.	May 2d. Remitted to fever ward.			This affection returned after an ab- sence of five years. Catamenia had been suppressed for six months.
Asby, (Marjaret) æt. 40. April 15th.	Anasarca.	During con- valescence.	Good.	April 30th. Cured.			This patient had general rheumatic pains, which were also cured.

1518. Name, Age, and date of Admission.	DISEASE.	Period of Attack.	State of health pre- vious to fever.	TERMINATION.		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.		
Jones, (Charlotte) æt. 20. April 15th.	Phthisis Pulmonalis.	During fever.	Good.		12th July.	Above a gallon of exceedingly fetid pus in the right side of the chest. The superior portion only of the lung remained, which was hard, heavy, sinking in water, and adherent to the ribs; its substance filled with abscesses and tubercles; pleura slightly thickened. Some firm adhesion between the parietes and left lung, which was slightly tubercular.	The fever, in this instance, was at- tended with marked symptoms of bron- chitis, which were never completely subdued. The course of her com- plaint was slow, probably owing to her having occupied a private ward; the 2d and 3d stages of phthisis were of short duration in all these patients, who lay in the common wards.
Howell, (Mary) æt. 24. April 17th.	Melæna.	During con- valescence.	Good.	May 11th. Cured.			
Mahony, (Catharine) æt. 19. April 17th.	Shooting pain of side.	During fever.	Good.	April 23th. Cured.			
Fairlan, (Patrick) æt. 35. April 18th.	Inflamma- tion of liver and lungs.	During fever.	Good.	June 28th. Cured.			Addicted to excessive drinking.

Ball, (Harriet) æt. 19, April 18.	Incipient Phthisis.	During fever.	In general good.	April 20, at her own lesire.	July 6,	Slight effusion on the surface of the brain, and in the ventricles. A thin clot of blood upon the inside of the arachnoid, and upon the superior part of the left hemisphere opposite to it. Right lung universally adherent. Left lung adherent to the pericardium, and diminished in size; its pleura rough, thickened and opaque; half a pint of fluid in the left cavity of the chest. Two gallons of bloody fluid in the abdomen. Abdomen, before the colon, and attached to the peritoneum of the parietes and intestines. Peritoneum thickened in part opaque, rough, and studded with small tubercles. Intestines thickened and soft. Colon, duodenum, gall-bladder, and pyloric extremity of stomach massed together. Liver hard and firm.	This girl was affected with hæmoptoe, æt. about three weeks before she took the fever. She had never menstruated.
Cosson, (Bernard) æt. 17, April 30.	Debility and emaciation succeeded by acites.	After a severe fever.	Delicate.			This boy was hectic when he was admitted, apparently from the irritation of a large unhealthy sore on the sacrum. After being three weeks in hospital he was attacked with pulmonary inflammation which yielded to topical bleeding, Jocotion of Iceland moss, &c., upon which his health improved, and the sore in his back healed; but it soon opened again, his health at the same time declining. Then the cough returned, and he complained of great tenderness of the abdomen, which was followed by acites. A day or two before he died he became pale, as if he had been exhausted by a hæmorrhage, an appearance which the dissection fully explained.	
Peter, (Elizabeth) æt. 33, April 30.	Hysteria.	Eight months previous to fever.	Delicate.	May 29, relieved.			
Kelly, (Mary) æt. 17, April 30.	Acites with curdles of the vagina.	During convalescence.	Good.	June 30, relieved.			In the course of this patient's illness the swelling of the abdomen more than once suddenly subsided, and again, in the course of two or three days, and then re-appeared. On the second day of May the menses appeared, after having been absent for a year, and the abdominal swelling suddenly subsided, but when the menses ceased, after a duration of two days it very rapidly returned.

1818. Name, Age, and date of Admission.	DISEASE.	Period of Attack.	State of health pre- vious to fever.	TERMINATION.		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge,	Date of Death.		
Jones, (Charlotte) et. 35. April 15th.	Phthisis Pulmonalis.	During fever.	Good.		12th July.	Above a gallon of exceedingly fetid pus in the right side of the chest. The superior portion only of the lung remained, and was hard, heavy, sinking in water, and adherent to the ribs; its substance filled with abscesses and tubercles; pleurae slightly thickened. Some firm adhesions between the perietes and left lung, which was slightly tubercular.	The fever, in this instance, was at- tended with marked symptoms of bron- chitis, which were never completely subdued. The course of her con- plaint was slow, probably owing to her having occupied a private ward; the 31 and 3d stages of phthisis were of short duration in all those patients who lay in the common wards.
Howell, (Mary) et. 25. April 17th.	Melana.	During con- valescence.	Good.	May 11th. Cured.			
Mahony, (Catharine) et. 19. April 17th.	Shooting pain of side.	During fever.	Good.	April 29th. Cured.			
Farlan, (Patrick) et. 35. April 15th.	Inflamma- tion of liver and lungs.	During fever.	Good.	June 28th. Cured.			Addicted to excessive drinking.

Ball, (Harriet) et. 19, April 18.	Incipient Typhoid.	During fever.	In general good.	April 20, at her own leisure.	July 6,	Slight effusion on the surface of the brain, and in the ventricles. A thin clot of blood upon the surface of the cerebellum, and upon the superior part of the left hemisphere opposite to it. Right lung universally adherent. Left lung adherent to the pericardium, and diminished in size; its pleura rough, thickened and opaque; half a pint of fluid in the left cavity of the chest. Two large coagula of blood on either side the abdomen, before the colon, and attached to the peritoneum of the parietes and intestines. Peritoneum thickened, in part opaque, rough, and studded with small tubercles. Intestines thickened and soft. Colon, duodenum, gall-bladder, and pyloric extremity of stomach massed together. Liver hard and firm.	This girl was affected with hæmoptoe, about three weeks before she took the fever. She had never menstruated.
Cosson, (Bernard) et. 17, April 30.	Debility and emaciation succeeded by æcites.	After a se- vere fever.	Delicate.			This boy was hectic when he was admitted, apparently from the irritation of his lungs. He had a threatening hæmoptoe. After being treated in hospital he was attacked with pulmonary inflammation which yielded to topical bleeding, injection of Iceland moss, &c., upon which his health improved, and the sore in his back healed; but it soon opened again, his health at the same time declining. Then the cough returned, and he complained of great tenderness of the abdomen, which was followed by æcites. A day or two before he died he became pale, as if he had been exhausted by a hæmorrhage, an appearance which the dissection fully explained.	
Foster, (Elizabeth) et. 33, April 30.	Hysteria.	Eight months previous to fever.	Delicate.	May 29, relieved.			
Kelly, (Mary) et. 40, April 30.	Æcites with œdema of the legs.	During con- valescence.	Good.	June 30, relieved.			In the course of this patient's illness the swelling of the abdomen more than once suddenly subsided, and again, in the course of two or three days, as suddenly re-appeared. On the second of May the menses appeared, after having been absent for a year, and the abdominal swelling suddenly subsided, but when the menses ceased, after the duration of two days it very rapidly returned.



1818. Name, Age, and date of Admission.	DISEASE.	Period of attack.	State of health previ- ous to fever.	TERMINATION:		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.		
Burke (M. Child) æ. 30. April 23.	Tympanitis with pain of left side.	Tympanitis during con- valescence.	Dedicate.	June 20, much re- lieved.			Pain of side had existed for a year previous to fever. She had anæsthesia.
McKeon, (Thomas) æ. 30. April 25.	Icterus.	On the 4th day of fever.	Good.	May 8, cured.			
Kelly, (Michael) æ. 30. April 26.	Pneumonia Pulmonalis.	During fever.	Affected with dysenteric symptoms.		May 27.	Four ounces of clear fluid in the pericardium; right lung not adherent, full of distinct tubercles; left universally adherent; substance harder than liver. Abscesses in the upper part and tubercles throughout. Mucous membrane of the small intestines slightly inflamed; numerous small ulcerations towards the termination of the ileum. Mucous membrane of the large intestines exceedingly pulpy and vascular.	This was a case of galloping consump- tion. The oppression of breathing, cough, and expectoration alternated with tor- mina, tenesmus, and bloody stools. The fever was attended with a pulmonary af- fection.
Curry, (Winifred) æ. 15. April 30.	Pneumonia Pulmonalis.	Previous to fever.	Subject to hemoptysis.	May 10, remitted to fever ward.			After her second fever this patient, very contrary to expectation, completely recovered from her pulmonary affection.
Ferne, (Mary) æ. 40. April 30.	Iritis.	During con- valescence.	Good.	May 27, cured.			Her stay protracted in consequence of an aneurism of the temporal artery.

Flintland, (William) et. 16. Mar. 1.	Chronic Bronchitis.	During fever.	Subject to short dry cough.	May 14, cured.			This man during his fever laboured under diarrhoea, which was attended with much exhaustion.
Murray, (Thomas) et. 55. May 6.	Œdema of feet and legs.	After fever.	Good.	May 9, cured.			
Addington, (Frederick) et. 12. May 8.	Hydrocephalus acutus.	During convalescence from a fifth attack of fever.	Delicate for six months previous.		May 25.	Numerous bloody dots on a section of the medullary substance of the brain. Fornix elevated; ventricles contained two ounces of fluid. Both lungs universally adherent; right lung slightly tubercular; pleura of left lung much thickened and vascular. Serous membrane of the liver covered with loose cellular prolongations.	
Ormsby, (Ellen) et. 25. May 9.	General Anasarca.	During convalescence.	Good.	May 29, cured.			This was one of those cases of anasarca which seem to depend on an inflammatory affection of the chest—of the pleura perhaps.
Coulton, (Eather) et. 40. May 9.	Inflammation of chest.	The pulmonary affection during fever.	Good.	June 5.			Dismissed, cured of the pulmonary affection, and relieved of pyrexia under which she also laboured.
Tyrral, (Ellen) et. 20. May 11.	General pains with hysteria.	After fever.	Good.	June 30, cured.			In this patient, who had not menstruated for a year, there was some reason to suspect a venereal taint, and the effects of mercury tended to strengthen the suspicion.

Right ear sound; the semicircular canals defective in the left ear, having each but one opening into the vestibule, running the usual course for a short distance, gradually diminishing, and terminating in a point.

1313. Name, Age, and date of Admission.	DISEASE.	Period of attack.	State of health pre- vious to fever.	TERMINATION.		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.		
Sutton, (Elizabeth) set. 1. May 14.	Pain of hip, with epilepsy subsequent to fever.	Pain of hip subsequent to fever.	Subject to maniacal epi- lepsy.	May 27, cured.			Dismissed cured of pain of hip; epi- lepsy probably continued.
Bailey, (Elizabeth) set. 24. May 14.	Phlegmo- nous swelling of are- olar right mamma under right lapse of fever.	At the termi- nation of are- olar right lapse of fever.	Previous to first attack of fever, good.	August 4th, cured.			Swelling under right mamma attri- buted to an injury received by falling out of bed.
Bourke, (Mary) set. 24. May 15.	Pneumonia.	During fever combined with pneu- monia.	Good.		May 19th.		This patient, in the latter part of her illness, was in a state of extreme suf- fering: pain and suffocation from in- ability to expectorate, harassed her night and day.
Fannin, (Thomas) set. 34. May 16.	Dysentery.	During fever.	Good.	June 29th, cured.			This patient, when convalescent from dysentery, became affected with acites, which yielded to a few doses of crystals of tartar and gamboge.
Mangan, (Michael) set. 8. May 16.	Anasarca, with affection of chest.	During fever.	Good.	May 17th.			Was taken away by his friends before the case was investigated.
Pureell, (Thomas) set. 30. May 17.	Catastrophic af- fection.	During the decline of fe- ver.	Good.	June 16th, cured.			

Becky, (Julia) set. 18. May 19.	Cyanotic tonillaria.	During con- valescence.	Good.	May 26th, cured.			Catamenia had been absent for two months.
Grogan, (Marian) set. 25. May 20.	General pains.	During con- valescence.	Good.	May 23d, relieved.			Seized with pains after getting wet feet.
Bulger, (John) set. 35. May 20.	Sybillic pains.	During con- valescence.	Good.	June 24th, cured.			The pains in this case abated after a slight attack of fever.
Morton, (John) set. 35. May 20.	Incipient Phtisis.	During fever.	Good.	May 28th, cured.			
Fanning, (Elixa) set. 35. May 21.	General debi- lity, with pain of hip.	After fever.	Delicate.	May 28th, remitted to fever ward.			
Armstrong, (Christoph.) set. 32. May 22.	Pleuritic stitches.	After fever.	Subject to cough.	June 26th, cured.			The chest was not affected during fever.
Conolly, (John) set. 35. May 27.	Pneumonia.	Cough exist- ed previous to fever.	Good.		4th June.		Addicted to drinking in excess. A dissection of the body could not be obtained.

1513. Name, Age, and date of Admission.	DISEASE.	Period of attack.	State of health previ- ous to fever.	TERMINATION.		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.		
Quigley, (Mary) Aet. 19. - May 30.	General ana- sarca.	During con- valescence.	Could not be ascertained.		24th June.		During her illness she passed blood by stool more than once, and had great tenderness of the epigastrium, and pain of the left hypochondrium, but was apparently recovering from these symp- toms, and from the anasarca, when she suddenly relapsed without any assign- able cause, and died in the course of five days.
O'Brien, (Mary) Aet. 19. June 2.	General pains.	During con- valescence.	Good.	June 20th. Cured.			Had not menstruated for 15 months.
Ryan, (Catherine) Aet. 25. June 2.	General dripping, with inflammato- ry affection of the chest.	At the termi- nation of fever.	Subject to cough; Hæ- moptysis.		9th June.		This woman had laboured under menorrhœa for four months. A few days after admission into the Whit- worth Hospital she was seized with fever, which was ushered in by dy- senteric symptoms. On the second day of the attack there was yellowness of the skin; tenderness of epigastrium, and much vomiting and purging. On the third and fourth the yellowness was increased, and there was general tenderness of the whole abdomen with rejection of every thing she took; and on the fifth day she died.

Brace, (William) et. 19. June 5.	Inflammato- ry affection of the chest.	During fever.	Good.	June 25th. Cured.			
Flood, (Catharine) et. 28. June 5.	Dysentery, with Hædic fever.	At the termi- nation of fever.	Good.		13th July.	Ventricles of brain filled with serous fluid; liver unusually hard; kidneys hard; less vascular than usual; sigmoid flexure of colon, and rectum thickened in their coats; internal surface inflamed and much ulcer- ated.	Delirium for three nights previous to death; on the day immediately pre- ceding, laborious wheezing respiration; prominence and staring of the eyes.
Burke, (Mary) et. 37. June 6.	Debility with perspirations.	At the ter- mination of a third at- tack of fever.	Good.	July 28th. Cured.			
Anderson, (Mary) et. 31. June 16.	General anasarca and æceticæ.	During con- valescence.	Good.	August 30th. Cured.			Recovering.
Bald, (Elizabeth) et. 28. June 18.	Incipient pathosis.	Cough com- menced two months pre- vious to fe- ver.	Subject to cough.	June 25th.			Discharged at her own desire; she had laboured under amenorrhœa for six months.
Cunningham, (Margaret) et. 33. June 18.	Incontinence of urine.	During fever.	Good.	June 28th. Cured.			

1518.	Name, Age, and date of Admission.	DISEASE.	Period of Attack.	State of health previous to fever.	TERMINATION.		NOBIL APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
					Date of Discharge.	Date of Death.		
	Doyles, (Peter) at 24. July 2.	Aphonia.	During convalescence.	Good.	July 24th, cured.			
	Packertham, (Mary) at 26. July 2.	Acute rheumatism.	During fever.	Good.				This patient is still in hospital, but convalescent.
	Ashe (John) at 23. July 4.	Painful oedematous swelling of right leg and thigh.	During convalescence.	Subject to occasional cough.	August 7th. Remitted to fever ward.			In this case the right groin was swollen, hard and painful when trochanter. He was relieved by leeching, a few days after which, the swelling subsided. When returned to the fever ward there was still slight oedema of the leg.
	Mitchell, (Mary) at 28. July 6.	General pains.	During fever.	Good.	July 17th, cured.			
	O'Hara, (Francis) at 30. July 6th.	Pain of left arm, with paralysis of left hand.	During crisis.	Good.	July 17th. Eased. Relieved.			The pain of the arm occurred on the night of crisis; paralysis on the following morning.
	Costello, (Arabella) at 30. July 6.	General pains, with dyspepsia.	Pains during fever, dyspepsia prominent.	Delicate.	August 3d, cured.			

Lee, (James) æst. 60. July 10.	Edema of legs and feet.	During con- valescence.	Good.	August 8th. Cured.			Remitted to the Richmond Surgical Hospital, for a tumour in the neck.
Reilly, (Michael) æst. 60. July 10th.	General pains.	During fever.	Good.	July 17th. Relieved.			
Farrell, (Hugh) æst. 35. July 15th.	Paralysis.	During con- valescence.	Good.				This, which was a case of paraplegia, occurred on the 2d day of conva- lescence from a relapse of fever. He had nearly recovered, the chief re- medy being an issue on the vertex.
Doolan, (Mary) æst. 51. July 15th.	General pains.	During fever.	Good.	Aug. 3d. Cured.			
Warren, (Robert) æst. 40. July 15th.	Edema of left foot and leg.	During fever.	Dyspeptic.	July 23th. Cured.			
Conner, (Patrick) æst. 22. July 17th.	Edema of feet and legs.	During con- valescence, from a third attack of fever.	Good.	Aug. 1st. Cured.			



1318. Name, Age, and date of Admission.	DISEASE.	Period of attack.	State of health previ- ous to fever.	TERMINATION.		EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.	
M'Bride, (Ellen) æt. 23. July 17th.	Oedema of feet and legs, with acetæ. July 17th.	On the 4th day of a 3d attack of fever.	Amenorr- hea for four months.		July 29th.	When admitted she laboured under diarrhoea, which, at the end of a week was succeeded by hæmorrhage from the bowels for a day or two; on the 8th day the abdominal swelling sud- denly increased; the umbilical region, as also the thighs and legs, were into- lerant of pressure. The diarrhoea re- turned and was attended with cough; pain of chest; oppression and dyspnoea. After three days of pulmonary distress, tenderness of belly suddenly subsided; the cough and oppression being much relieved. The pains of the thighs and legs however became much aggravated, and there were occasional severe pa- roxysms of dyspnoea with sinking of strength, and on the 19th day after admission she died.
Horn, (Elizabeth) æt. 17. July 30th.	Incipient phtisis	During a re- lapse of fever.	Subject to cough on exposure to cold.	Aug. 30th.		This girl seemed to owe her recovery to tar vapours, which she inhaled in a private ward.
Talbot, (Frederic) æt. 13. July 21st.	Oedema of feet and legs.	During con- valescence.	Good.	July 25th. Cured.		This patient, upon the subsidence of the oedema, was seized with fever; the swellings have not returned during his second convalescence.

Dysentery. (Mary) set. 30. July 28th.	Dysentery.	During convalescence.	Good.	Aug. 14th. Cured.		Recovering.
Gonorrhea (Mary) set. 30. July 28th.	Edema of feet and legs.	During convalescence.	Good.			
Typhoid (Mary) set. 30. July 30.	Dysentery.	During fever.	Good.	August 9th.	Slight effusion in the ventricles between the convolutions, and in the basis of the brain. Large intestines full of ulcerations, which beginning by small and very numerous depressions in the mucous coat, became very large as they extended up the colon. In the lower part of the ileum there were several ulcerations, three of which had penetrated through all its coats, but from the roughness of the serous membrane which surrounded the ulcers, the intestines seemed to have formed adhesions, and in this way the escape of their contents into the the cavity of the abdomen was prevented.	During the whole course of this patient's illness the abdomen was so tender as to be impatient of the slightest pressure. She had laboured under amenorrhoea for six months previous to admission.
Typhoid (Francis) set. 30. July 30.	Anasarca and Ascites.	During fever.	Good.	14th August, at his own desire.		He was reported to have laboured under symptoms of dropsy when a child. In the present instance the dropsy appeared to be the consequence of mercurial irritation, under which he had laboured for a considerable time: his mouth was very sore when he came into the Whitworth Hospital. Symptoms of scrotitis were appearing when he was discharged.

1813. Name, Age, and date of Admission.	DISEASE.	Period of attack.	State of health, previ- ous to fever.	TERMINATION.		MORBID APPEARANCES AFTER DEATH.	EXPLANATORY REMARKS.
				Date of Discharge.	Date of Death.		
Curry, (Catharine) et. 57. August 11.	Chronic Peripneu- mony.	During Con- valescence.	Subject to colds.				Amputations for six months. In hospital.
Devine, (Richard) et. 12. August 11.	Hydrothorax & morbus coxæ.	During Con- valescence.	Good.		August 23th.	Serum in all the cavities; 6 ounces in the bag of the arachnoid; 3 oz. of pus and lymph in hip joint; membrane round the neck of the femur vascular and thickened; the joint fairly lodged in the acetabulum.	Right leg lengthened by 14 inch. Toe erected. Bone healed. N. 14. Acetabulum was sound, save at the edge of the depression, which was slightly eroded.
Gussek, (Nicholas) et. 32. August 12.	General pains.	During fe- ver.	Good.				
Coffey, (Thomas) et. 36. August 12.	Chronic Rheumatism.	During Con- valescence.	Good.				In hospital.
Sherlock, (William) et. 38. Aug. 13th.	Hydrothorax	During Con- valescence.	Good.				In hospital.

In eleven out of thirteen of the foregoing patients who became hydropic during or after fever, the urine was found not to coagulate, viz. in Bernard Connor, Mary Kelly, Eliza Quigley, Catherine Ryan, Rich. Barrett, Catherine Doyle, James Lee, Rob. Warren, Patrick Connor, Patrick Talbot, and Dennis Crombie. In two the urine coagulated, namely, Ellen Macbride and Mary Anderson. In Marg. Ashley, Thos. Murray, Frederick Addington, Ellen Ormsby, Michael Mangan, Mary Connery, Francis Lyons, Richard Devine, and William Sherlock, the urine was not examined.



# **SURGICAL REPORT ;**

CONTAINING

AN ACCOUNT

OF THOSE

**AFFECTIONS OF THE PENIS**

WHICH ARE GENERALLY CONSIDERED AS PRIMARY  
SYMPTOMS OF SYPHILIS, WITH THE MODES  
OF TREATMENT EMPLOYED IN THE

**RICHMOND SURGICAL HOSPITAL,**

BY C. H. TODD,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, &c.

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**I**N the Richmond Surgical Hospital seven small wards are set apart for the reception of male patients labouring under venereal complaints. These wards, which contain thirty beds, are always full, and afford the Surgeons ample opportunities of practice in such cases ; and as a large proportion of them have been placed under my care, I propose, in a series of successive reports, to treat of the various appearances and progress of these affections, and to give an account of the treatment of each, as at present pursued in my division of the Hospital.

In the reports which it is my intention, from time to time, to publish in this work, all theoretical discussions, either on the nature of venereal diseases, or on the use of the several remedies employed for their cure shall be avoided ;\* I shall confine myself to statements of facts, with such observations only as appear calculated to throw light on, or explain our hospital practice. In the following pages I propose to examine the several affections of the male organs of generation, which have been generally considered as primary symptoms of syphilis.

#### INFLAMMATION OF THE PENIS.

In hospital practice one of the most common affections of the penis is inflammation, and this we find is produced by several causes, both local and constitutional. The local causes are neglected secretions, collected under the prepuce, and on the surface of the glans ; imperfectly treated excoriations ; laceration or any other external injury ; gonorrhœa, ulcers, &c. Any unhealthy state of the system, in whatever way produced, whether by preceding diseases, irregularity of habits, or occupation, may be considered as the constitutional or predisposing cause of this affection.

Phymosis, or Paraphymosis, exists in almost every severe case of inflammation of the penis ; the former

\* For the best information on these important points, I must beg leave to refer to the ingenious Essays of my friend and colleague, Mr. Carmichael, one of the Surgeons to the Richmond Hospital.

occurs more frequently than the latter ; and so long as that state of the prepuce continues, if there is no external ulceration, we can form an opinion as to the probable cause of the disease only from the account the patient may give us ; a source of information which, in an Hospital particularly, is seldom to be relied on. I have not latterly considered an early decision on this point of much importance ; for during the existence of inflammation, the treatment of all cases must be, in essential points, the same ; when the tumefaction subsides so as to admit of the retraction of the prepuce, the origin of the affection may be detected, and the subsequent management of the patient regulated accordingly.

Although it must be admitted that syphilitic ulcers occasionally excite very violent inflammation in persons of irritable habits of body, or in such as are peculiarly liable to inflammatory action, yet inflammation of the penis is so common an occurrence amongst the lower classes in this city, and is so rarely met with in the higher circles, when due attention to cleanliness is observed, that I have long looked upon it, in Hospital practice, as an affection almost uniformly local ; and I have never had occasion to regret the adoption of a plan of treatment which this opinion naturally suggested.

When young men of plethoric habits are attacked with inflammation of the penis, the symptomatic fever is usually very considerable ; the pain is great, and from the tense and turgid state of the inflamed



part we sometimes have reason to fear that gangrene will quickly supervene. Whether there is any peculiarity in the structure of the parts composing the penis, which renders that organ more liable to inflammation and its more alarming sequelæ, than many other external parts, I am not prepared to decide; but, Hospital experience has convinced me, that acute inflammation of the penis is very easily excited, and very rapidly produces mortification; and that cases of gangrene of the prepuce, or even of the glans or body of the penis, on the fourth or fifth day from the first appearance of disease, are by no means uncommon. A knowledge of these facts has induced me to pursue the most active treatment from the commencement, having too often observed, that indecision as to the expediency, or delay in the employment of vigorous measures, has been productive of the worst consequences.

In acute inflammation of the penis a strict enforcement of the antiphlogistic regimen is most necessary. Confinement to bed, rigid abstinence, and free depletion, are indispensable; but copious blood-letting in the earliest stage of the disease, is the remedy on which we must place our principal reliance. From sixteen to twenty ounces of blood are to be withdrawn at first, and in the case of a stout healthy patient, I should have no hesitation in directing a repetition of venesection so long as the local symptoms remain urgent, and the fever continues. The benefits derived from blood-letting will be found, in a great degree, to depend on the early employment

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of that remedy to as full an extent as the patient is able to bear ; but even in cases where mortification has actually commenced, it is often necessary to have recourse to the lancet once or twice, particularly in plethoric patients, and in such as have neglected their disease in the incipient stage of inflammation.

The abstraction of blood from the penis by means of leeches is found extremely useful in many instances, but this should be looked upon purely in the light of an auxiliary remedy, and as by no means sufficient to supersede general blood-letting, except in debilitated or unhealthy constitutions. A very general prejudice exists against the application of leeches in these cases, which has originated in an erroneous idea, that the leech-bites are liable to degenerate into venereal ulcers, an occurrence which I have never witnessed ; it is true, leech-bites on an inflamed penis do occasionally suppurate, and even ulcerate so as to become very inconvenient to the patient, yet this objection should not deter the practitioner from having recourse to local blood-letting, when severe inflammation, pain and tension of the part indicate its expediency.

In our selection of applications to be made to the inflamed penis, we are governed very much by the sensations of the patient. Cold and warm fomentations are equally beneficial, if equally grateful to the patient. I generally direct a cold lotion to be made use of at first, and continue it so long as it affords relief ; when this application ceases to be of use, or

excites uneasiness, as is frequently the case after the second or third day, warm stupes and poultices are substituted. Whether a purulent discharge from within the prepuce exists or not, patients ought to inject tepid water between it and the glans penis very frequently in the day ; this is a necessary precaution, as the irritation excited by matter, or even by inspissated mucus confined in that situation, will keep up and encrease inflammatory action. In cases of severe phymosis, where there are extensive excoriations or ulcers, and the quantity of matter is considerable, and where the orifice of the prepuce is so much contracted as to prevent the discharge from escaping, a division of the prepuce for the extent of about an inch at its upper part, is usually performed with great advantage. I have sometimes seen the prepuce divided for the whole of its extent ; this, however, is not only useless in almost every instance, but very generally productive of injury, in consequence of the size of the ulcer, which unavoidably succeeds to an incision so extensive, and the permanent and inconvenient deformity of the part which remains after the parts have healed.

During the entire progress of this affection, patients are to be kept as much as possible in the horizontal position, and the penis supported so as to prevent its becoming pendulous ; laxative medicines are occasionally to be exhibited ; if symptomatic fever runs high, and the temperature of the skin is much augmented, saline draughts, or small doses of a diaphoretic mixture, composed of the water

of acetated ammonia and antimonial wine, are to be administered at proper intervals ; and to relieve pain and produce sleep, an opiate combined with an antimonial is to be given at night.

Under this plan of treatment our patients generally recover in the course of a few days ; pain and fever subside, and the inflammation and swelling gradually disappear ; the prepuce recovers its natural dilatibility, and a retraction of it affords an opportunity of ascertaining whether any and what description of ulcer exists underneath.

From this inspection, however, we have it not in our power always to arrive at a satisfactory conclusion ; we are often compelled to remain in doubt as to the real cause of the inflammation. In some constitutions it appears that genuine chancres will heal spontaneously, or with very little local attention ; or that their specific characters will be altered or effaced by severe inflammation, so as to deprive them of those distinctions which have been commonly considered as essential to them. And I am convinced that a violent inflammation of the penis quickly supervening on chancres, may effectually destroy their syphilitic nature, and convert them into ulcers purely local ; a change which I believe will often take place in cases where inflammatory symptoms are very acute, or where the chancres and contiguous parts have suffered the process of sloughing.

In the Richmond Hospital we have long been in

the habit of abstaining from the exhibition of mercury in cases where, on the subsidence of inflammation, no ulcer was discovered, or where such ulcers as might exist presented a florid, healthy appearance, and speedily cicatrized under the influence of some simple lotion, conceiving it more prudent, under such circumstances, to wait for symptoms of constitutional disease, than to incur the risk of administering mercury unnecessarily.

The period at which cutaneous affections or other constitutional symptoms of syphilis succeed to chancres, it is well known is indefinite, and is believed to depend on a variety of causes, which it would be superfluous on the present occasion to detail. However, from observations made on the Hospital cases, I may affirm, that this will be found in a great measure to depend on the circumstance of mercury having been used or not at the commencement of the disease. If mercury is used when chancres first appear, and before inflammation of the penis sets in, constitutional affections will in all probability be retarded. But in the cases wherein that medicine has not been resorted to in the first instance, we may expect that those symptoms will shew themselves in the course of a few weeks. Indeed it often happens that they do appear, even before the effects of the inflammation are sufficiently removed, to justify us in discharging the patient from the hospital.

On the prepuce being retracted, we often find its internal surface, and the surface of the glans penis,

particularly near to the corona, excoriated or superficially ulcerated; in these cases, under the use of a saturnine or zinc lotion, the parts cicatrize in a few days. In other instances granulating ulcers sometimes presenting a fungous appearance, and even resembling condylomata, are met with; these are treated with the lotion of the sulphate of copper or nitrate of silver, and are seldom obstinate. In others we discover deep and irritable ulcers, with a foul and sloughy surface; in such cases the unguentum Hydrar. Nitratis, or the red precipitate in powder, will, after two or three applications, destroy the morbid sensibility of the parts, and cause the ulcers to assume an healthy appearance: however, should they resist local treatment, and particularly if any symptom of bubo should occur, we commence the exhibition of mercury, which seldom fails in producing salutary effects on the disease, provided its effects on the constitution of the patient are not obstructed by any peculiarity of habit, or irregularity in the employment of the remedy.

After the acute symptoms of inflammation of the penis subside, it often happens that a considerable degree of tumefaction, and a dusky redness of the part, without much pain or tension, continue for some days. This is observed to occur most frequently in persons who have passed the middle period of life, and who labour under some chronic visceral disease arising from intemperance or hardship. When not interfered with, this affection is sometimes very tedious; and when excited, either in consequence of general

indisposition, or local irritation, it is liable to take on an acute inflammatory action, from which the most alarming consequences are to be apprehended. Nay, in this indolent condition of the penis I have seen gangrene set in even without any apparent accession of inflammation, or uneasy sensation in the part, except a slight degree of itching; and a part of the prepuce has been actually destroyed before the patient was aware of his danger.

This morbid state of the prepuce, I apprehend, is not solely dependent on local causes, and, consequently local remedies are not to be relied on for its cure. The digestive organs, and in particular, the biliary system, are to be closely attended to, and if we find their functions impaired, we must resort to the remedies best adapted to restore them. Large doses of calomel are employed in these cases with decided advantage, as soon as severe pain and tension have subsided. Indeed when the skin and eyes of the patient have a jaundiced appearance, when the tongue is loaded, or any unusual fullness or tenderness is discovered in the region of the liver, the use of calomel is commenced, even before acute symptoms have completely subsided. \*

\* R. Submur. Hydrar. gran. viii, Pulveris Antimonialis, gran. ii. Cons. Ros q. s. ut fiat Bolus.

I generally direct the foregoing Bolus to be taken for three or four nights in succession, provided its effects on the bowels are not too severe, and then small doses of the sulphas magnesicæ are exhibited daily, with an occasional repetition of the Bolus until symptoms have undergone a material improvement.

It may be objected to this practice, that the constitution of the patient will become quickly mercurialized by the exhibition of large doses of calomel, an effect which they generally produce, and that the question of the syphilitic origin of the disease will be thereby involved in greater obscurity than if mercury had not been administered. In reply to this I would beg leave to state, that cases of what may be termed chronic inflammation of the penis, are very seldom syphilitic; that under a mode of treatment essentially different from that now recommended, the recovery of the patient is slow and uncertain; and that at last an alterative, and sometimes a protracted course of mercury must be resorted to, for the removal of a diseased and indurated state of the prepuce, which almost always remains for a great length of time, after an attempt to cure the complaint by local remedies alone. And even admitting that this affection of the penis originates in a syphilitic infection more frequently than I believe to be the case, if the patient is salivated after the third or fourth calomel bolus, it is probable that the degree of mercurial action, thus induced, if it be competent to remove local appearances of syphilis, will be sufficient to secure the patient from further symptoms of the disease, as effectually as mercury in any quantity can secure him.

If the patient complains of pain, or is restless, a grain of opium is added to the bolus, and if a tendency to ptyalism is induced, the calomel is discontinued.



All the cases of this disease of the penis which have come under my care in the Richmond Surgical Hospital, and in private practice for several years past, have been treated according to this plan, and recovery has been, with very few exceptions, both expeditious and perfect ; of these cases I do not recollect a single instance in which constitutional symptoms unexpectedly supervened ; so that I have adopted it as a rule of practice, not to allow the mere apprehension of this mode of treatment preventing the disease from developing itself, to deter me from exhibiting calomel on the principle, and at the period I have recommended ; neither would I persevere in the use of this medicine, or of mercury in any other form, for a longer time than local symptoms, or a disordered state of the digestive organs seem to require, on the uncertain chances of the disease being syphilis, and of the continuance of a mercurial course preventing secondary symptoms.\*

#### PARAPHYMOSIS.

This painful and alarming affection of the penis arises from a contraction of the prepuce behind the glans; and a consequent strangulation of the latter. In some instances a sudden tumefaction of the glans, when the prepuce is retracted, will appear to be the

\* This mode of treatment is successfully employed in the Richmond Hospital in cases of chronic inflammation of other external parts, and particularly of the feet and legs, to which the poor in this city are very liable.

primary cause of paraphymosis, but it is more generally found to originate in disease or contraction of the prepuce. However, it is evident that, when paraphymosis is once produced, both these causes continue to operate in increasing each other, and thus render the disease more obstinate, and delay more dangerous.

The stricture in paraphymosis is generally formed by the edge of the prepuce, which becomes very much tightened behind the glans; the latter swells considerably, and assumes a livid colour. If the disease continues many hours the integuments of the penis also swell and inflame, so that the constricted portion of the prepuce becomes imbedded in the penis, and concealed between the swollen glans and integuments. Under such circumstances the case is liable to be mistaken for a simple inflammation of the penis, an oversight for which the practitioner can plead no apology.

The existence and situation of the stricture may be ascertained, by gently drawing the integuments of the penis towards the pubis, at the same time that the glans is turned a little to one side. In cases of this kind the stricture is very tight, and in general must be divided before a reduction of the glans can be effected; this may be done by the Surgeon introducing a director under the edge of the prepuce, on which a sharp pointed bistoury is to be passed, and the point of the bistoury being pushed through the prepuce above the stricture, the contracted part

which is usually very narrow, is to be cut across. It will often be necessary to divide the stricture on both sides of the penis, and will be better in all cases wherein the glans is much distended with blood, the parts very painful, and the stricture unyielding, to perform this simple operation, without any previous attempt at reduction; such attempts being always productive of much pain to the patient, and being generally fruitless, unless when undertaken at the earliest period.

In many cases of paraphymosis, an eversion of the internal surface of the prepuce takes place, which gives the penis a peculiar contorted appearance: this everted portion of the prepuce is situated between the stricture and the glans; and its cellular tissue becoming infiltrated with serum, and particularly so at the lower part, a tumor is formed even larger than the glans. In this species of paraphymosis, numerous punctures must be made with a lancet through the transparent membrane covering the distended part of the prepuce, and the effused fluid completely discharged, before the operation of reduction ought to be commenced. It frequently happens in cases of this kind, that, when the extravasated serum has passed off, a relaxation of the stricture ensues, and the parts are easily replaced; however, should the stricture continue obstinate, a small incision made into it with a lancet, at the side of the penis, will, in general, be sufficient to remove it: the operation with the director and bistoury described above, cannot with propriety be

performed here, as much of the prepuce would thereby be unnecessarily divided.

When paraphymosis is complicated with extensive ulceration of the penis, or when the disease has been neglected, and gangrene of the glans has commenced, reduction by force cannot be attempted with safety; under such circumstances we must freely divide the stricture, and endeavour to produce relaxation and spontaneous reduction, by the application of emollient stupes and poultices. The same plan is to be pursued where nature employs the process of ulceration to relieve the strangulation, either by destroying the part in which the stricture exists, or by removing the part on which the stricture presses. The efforts of nature, however, in these cases, are usually ineffectual, and the cure will be more expeditious and more certain by the treatment recommended above being early adopted.

An affection which may be termed a chronic paraphymosis, is very frequently met with amongst hospital patients; in this the stricture is not so great at its commencement as to produce pain, and the disease is therefore neglected for several days; ultimately the prepuce becomes thickened, the penis distorted, and, although the glans is not actually strangulated, yet we find it impossible by manual operation to restore the parts to their natural position; this is a case to which a mode of treatment similar to the foregoing is applicable; it sometimes will yield to relaxing applications, but in most

instances a division of the straitened portion of the prepuce will be found necessary.

A partial paraphymosis sometimes takes place in cases of extensive ulceration of the glans penis, which appears to be the consequence of the margin of the prepuce pressing on the ulcer, and exciting severe irritation ; inflammation ensues, the extremity of the glans becomes enlarged, and is constricted by the prepuce, and the patient suffers excruciating pain ; a division of the prepuce to an extent sufficient to relax the stricture, and to enable the dresser to interpose suitable applications, will afford considerable relief. This division of the prepuce will be most advantageously made at a part remote from the ulcer of the glans.

Although in the acute forms of paraphymosis our principal reliance must be placed on the prompt and decisive employment of local remedies, yet in severe or obstinate cases we always experience great assistance from constitutional treatment. In a patient of a full habit of body the antiphlogistic regimen must be rigidly enforced ; the lancet is to be used with freedom, and particularly if the replacement of parts cannot be effected without much force ; in such cases considerable benefit will often result from the patient being bled to 18 or 20 ounces immediately before reduction is attempted. In boys, who are very liable to paraphymosis, and often conceal their complaint until the stricture and swelling become alarming, I have found the warm bath very effectual in producing re-

laxation, relieving pain, and in rendering the reduction of the glans a less difficult operation.

After a paraphymosis is removed, the case is to be looked upon as one of inflammation of the penis, and treated accordingly. The antiphlogistic regimen must be adhered to for some days; the patient is to be cautioned against drawing back the prepuce, until the parts completely recover their natural texture; cleanliness must be carefully observed by frequent injections of tepid water under the prepuce, and if phymosis ensues, which is often the case, it is to be managed according to the plan detailed in the preceding section.

#### ERYSIPELAS OF THE PENIS.

Erysipelas of the penis is generally produced by local irritation acting on an unhealthy subject. It is seldom venereal, although it may be excited by chancres, and particularly when they are irritated by any severe stimulating or astringent application. It is a more common affection in old men and boys than in persons of the middle periods of life, and those who have a congenital or permanent phymosis, and are thereby disposed to excoriations and other eruptions on the tender skin of the glans and prepuce, are very frequently attacked by it.

Erysipelas of the penis is accompanied with more or less œdema, and a patients labour-

ing under general anasarca. In old men it is sometimes the consequence of those abrasions and ulcers which are produced by the extremity of the prepuce retaining the last drops of the urine, and in boys who, from a peculiar sympathetic sensation excited in the glans by irritation in the urinary or digestive organs, have acquired the habit of pulling the prepuce, erysipelas of the penis often takes place.

When this affection succeeds to a phlegmonous inflammation of the penis, it may be symptomatic of disease deeply seated; either of abscesses, of sloughing of the cellular substance or fascia, or of fistulous ulcers under the integuments. I was lately called upon to visit an elderly gentleman labouring under erysipelas of the penis to an alarming extent, which, although he suffered much pain, and was confident he had no venereal complaint, he was induced by mistaken delicacy to conceal for several days. The prepuce was much swelled and elongated, the symptomatic fever was very high, his tongue covered with a yellow slime, he had severe rigors, and his servant informed me that a strong tendency to delirium existed during the night. On examining the penis attentively, I discovered a fluctuation on its dorsum near the pubis; I made a small incision into this part, and gave exit to more than an ounce of offensive matter; on the following day a large slough was discharged through the wound, and perfect recovery rapidly followed.

The tumefaction and redness which occur in ery-

apelas of the penis, and the degree of fever which accompanies it, are often very alarming ; however I do not recollect an instance of an unfavorable termination of the disease, except in complicated cases, or in such as were very much neglected or maltreated at the commencement. When this affection is purely idiopathic, or produced by local irritation, the treatment of it is not different from that which is applicable to erysipelatous inflammation of any other part ; the chief point to be early attended to, is the removal or palliation of the exciting cause, if any such can be detected. In cases where œdema exists to such a degree as to contract the orifice of the prepuce, and to interfere with the free discharge of urine, a few superficial punctures with a lancet will unload the cellular substance, and by removing the tension of the skin, will contribute materially to the relief of the patient.

Where the redness of the part is very great, and the patient complains of much pain, heat and tension, almost immediate relief may be afforded by the early application of a few leeches ; but if the patient be old or debilitated, leeches are not admissible, for in most instances the discharge of blood from the skin of the penis, produced in this way is great, and often not easily suppressed.

A cold lotion constantly applied to the part will often remove the disease in a day or two, and I have no hesitation in prescribing it when treating a young and healthy patient ; but in cachectic constitutions,



erysipelas sometimes assumes an erratic form, which proves tedious and embarrassing, repellent applications are therefore not to be used indiscriminately,—warm fomentations, injections of tepid water under the prepuce, and occasionally emollient poultices, are the local remedies most commonly employed in the hospital. Farinaceous or absorbent powders have been applied to the erysipelatous surface, but they are now seldom used in these cases, in consequence of the inconvenience they occasion to the patient by forming incrustations in the groins and amongst the hair of the pubes and scrotum. In all cases of erysipelas of the penis, and especially if the disease extends to the scrotum and surrounding parts, minute inquiry should be made into the state of the urethra, as this affection is a constant attendant on urinary infiltrations.

#### GANGRENE OF THE PENIS.

There are few occurrences in the progress of disease which excite more alarm in the mind of the patient, and more anxiety in that of his Surgeon, than even the slightest appearance of gangrene on the penis. When inflammation of that organ is treated with activity, and the treatment commenced at an early period, gangrene seldom ensues; instances, however, not unfrequently happen, in which the most energetic practice fails to prevent this fatal effect of inflammation, and the parts fall into a state of mortification with a rapidity of progress which is scarcely credible; whether this is owing to any pecu-

liarity of habit in the patient, or of structure in the part affected, or to both, it is not of importance at present to determine ; to be aware of the fact is sufficient to put us on our guard, and to induce us in all cases of acute inflammation of the penis, to use the most active remedies to effect its reduction.

Patients very frequently apply at the hospital with the extremity of the prepuce in a state of mortification, and the rest of the penis highly inflamed. The treatment of a case of this kind must be strictly antiphlogistic, the diseased parts are to be fomented at regular intervals, and the effervescing poultice applied, which is to be renewed at least every third or fourth hour. Where the patient complains that the weight of the poultice is inconvenient, or productive of much pain, dossils of lint wet in the nitrous or muriatic acid lotion may be substituted; either of these applications have been found efficacious in correcting foetor, and promoting the separation of sloughs. At the same time injections of a decoction of chamomile flowers with tincture of myrrh, may be thrown into the orifice of the prepuce, and thus putrid matter removed from the surface of the glans. If we find, on the subsidence to a certain extent of inflammatory symptoms, and of pain, that the mortified parts are slow in separating from the sound, dressings of the unguentum elemi with ol. terebinth. or of the balsam of Peru, may be employed with great advantage. From the latter application I lately saw much benefit in a case where the former had been used for several days without any perceptible effect.

Cases of severe inflammatory phymosis, in which the extremity of the prepuce is very much contracted, are sometimes accompanied by a protrusion of a portion of its lining membrane; this becomes constricted in the orifice of the prepuce, an effusion takes place into its cellular tissue, and an exquisitely painful tumor, which rapidly becomes gangrenous, is the consequence. This affection is not an unfrequent occurrence in that species of phymosis which succeeds to the reduction of a paraphymosis, and particularly in boys, and in such persons as have a natural phymosis, or a prepuce longer than usual.

Early attention to a case of this kind may save the patient from much suffering and inconvenience; the tumor at the extremity of the prepuce is formed entirely of the cellular tissue, distended with serum; it ought to be punctured on its surface, and the effused fluid gently pressed from its cells; the swelling will then collapse, and the membrane by which it was covered may be reduced within the prepuce; the parts are then to be fomented and poulticed, and the recurrence of the protrusion, or rather of the partial eversion of the prepuce, prevented. This plan of treatment is, in some instances, counteracted by the extreme tightness of the orifice of the prepuce; in this case it will be expedient to divide the stricture with the bistoury, a very small incision will effect this purpose, and will enable us to reduce the tumor, and relieve the patient very considerably. However, should the part become gangrenous, the remedies detailed above must be resorted to.

In treating of inflammatory phymosis I stated, that in severe cases where there are extensive excoriations or ulcers, and the quantity of matter is considerable, and where the orifice of the prepuce is so much contracted as to prevent the discharge from escaping, a division of the prepuce for the extent of about an inch, at its upper part, is usually performed with great advantage. This operation, when resorted to in proper time, may prevent an affection of the penis, from which patients always experience great pain and danger, namely, a sloughing of the prepuce, succeeded by protrusion of the glans. This disease appears to be, in many instances, the result of the confinement of matter under the prepuce, which excites inflammation of the glans and ulceration of the internal surface of the prepuce; the ulceration extends rapidly at that part of the prepuce which is most pressed upon by the glans, at last the corresponding part of the skin mortifies, falls out, and the glans protrudes through the aperture thus formed.

In this state of the penis the sufferings of the patient are very great, and are much aggravated by the inconvenient position which the prepuce assumes; the weight of a poultice is intolerable, and even the lightest and simplest dressings afford no relief; ulceration continues to extend; matter is retained within the prepuce, and often insinuates itself under the integuments of the penis towards the pubis, producing a further sloughing of the parts. The danger does not end here, for in many the swelling of the glans encreases after its protrusion, it becomes strictured

by the edge of the opening in the prepuce, and consequences equally formidable with these of an acute paraphymosis, are to be apprehended.

I have constantly observed, that cases of this sort terminate more favourably, and are attended with much less pain, when the mortification of the prepuce is extensive, and particularly if it reaches to the extremity of that part, so as to destroy its cavity; under such circumstances there can neither be stricture of the glans, nor lodgement of matter, and thus two principal sources of danger are obviated. Whenever a tendency to strangulation of the glans appears, or matter confined within the prepuce is an evident cause of irritation; these evils may be obviated by a free division of the prepuce, or by the removal of it altogether; when the prepuce is short, is healthy in its appearance, and the interval between its natural opening and that through which the glans has protruded is not great, I merely divide it with one stroke of the bistoury; but when the prepuce is large, is tumefied and thickened, and attached to the penis only by a narrow neck, its complete removal is preferable.

These operations are generally successful in relieving the patient from much pain, and sometimes in saving the glans penis from mortification; however, it is necessary to caution the young practitioner against the indiscriminate use of the knife in diseases of the penis. Before an operation is determined on, there are many points to be investigated

and duly considered, which not only relate to the nature of the local affection, but also to the state of health and habit of body of the patient; much, therefore, must depend on the judgement and discretion of the surgeon. Instances have occurred to me in which incisions of the prepuce were productive of alarming inflammation, and of tedious and even malignant ulcerations; these, however, are casualties which I have rarely met with in patients of sound constitution, and in whom suitable measures were adopted to prevent or subdue inflammation.

Mortification of the glans and corpora cavernosa penis is to be treated according to the plan already detailed; however, when the sloughs are separating, these cases are rendered exceedingly embarrassing by the occurrence of hæmorrhage, to which the vascularity and structure of the parts render them peculiarly liable, and which often proceeds to such an extent as to bring the life of the patient into imminent danger.

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When profuse bleeding takes place from either the glans or corpus cavernosum, we must first endeavour to ascertain, whether the hæmorrhage proceeds from a single vessel, or from a diseased surface. If phymosis exists, as is commonly the case, the prepuce must be laid open, and retracted, so as to expose the ulcer. We sometimes are fortunate enough then to discover the orifice of an artery, and may secure it with the forceps and ligature; but more generally the blood seems to issue from a

ber of points, or the bleeding vessel is situated so deeply within the surrounding granulations, that it cannot be distinguished. Under such circumstances we must try the efficacy of styptic applications; doses of lint wet with the oleum terebinthinæ may be applied to the bleeding surface, and retained there by means of a bandage, or a piece of sponge, or agaric may be fixed on the part. Pressure is often necessary to restrain a hæmorrhage from the penis, and ought always to be resorted to where it can be applied with tolerable facility. To enable us to use pressure without much inconvenience to the patient, we must first introduce an elastic catheter into the bladder; and having regulated the application and compresses on the diseased surface, we must apply a long and narrow roller to the penis, with that degree of tightness which may appear sufficient to moderate the influx of blood into the part without producing pain: this roller ought to be fastened to a bandage passed round the pelvis of the patient, and I have found advantage from having it kept constantly wet with very cold water, to which a small quantity of spirit of wine has been added. A cork being adapted to the catheter, that instrument is to be fastened to the roller on the penis, and the patient is to be instructed in the manner of discharging his urine through it.

The parts are to be allowed to remain in this state for two, three, or four days, according to circumstances; but if the catheter occasions much irritation, or if the patient complains of much pain from

the swelling of the penis, or the tightness of the bandage, or if an acrimonious and foetid discharge passes in great quantity from the prepuce, all applications must be removed, and, if necessary, renewed.

We frequently meet with cases of hæmorrhage from the penis, in which the foregoing plan of treatment cannot be adopted, or when commenced cannot be persevered in for a length of time sufficient to render it successful. When the penis is very much swelled and inflamed, and the ulcers very irritable; styptic applications, and even the most moderate pressure, are liable to occasion so much pain that we are compelled to lay them aside. In a case of this kind, if the bleeding is profuse, and has recurred so frequently as to weaken the patient, and if all our efforts to discover and secure the orifice of the blood vessel have been ineffectual, we must cut upon the dorsal arteries of the penis near to the pubes, where they lie parallel to each other, and inclose them in a ligature. If one of these arteries only is tied, there is every probability that the hæmorrhage will return, and render a repetition of the operation necessary, an instance of which occurred in the hospital within these few months.

In cases of hæmorrhage from the glans or prepuce, this operation, I believe, has seldom failed to give complete security to the patient; but when the corpora cavernosa slough or ulcerate, and bleeding



ensues, anatomy teaches us that tying the dorsal arteries would be altogether useless.

The peculiar structure of these bodies renders them very liable to hæmorrhage when their cells are opened by mortification or ulceration, but it is seldom arterial, and not often so profuse as when it proceeds from the glans or prepuce; sometimes however it is alarming, and then it is suppressed with very great difficulty. In some instances of this kind I have succeeded in tying a large artery in the corpus cavernosum, or connected with its external aponeurotic membrane; and I have been compelled in others to include the bleeding part within a ligature applied with a curved needle; but in these cases the ligature is seldom successful, so that we must chiefly rely on styptics and pressure. In two or three instances in which bandages could not be applied, in consequence of the great loss of substance, I was under the necessity of employing one of my pupils to sit at the bed side of the patient, for several hours, and make pressure on the part with the finger or hand, until the bleeding had ceased; and in a case of this kind, which occurred in one of my wards in the Lock Hospital a few years ago, the patient was so much exhausted by the repeated attacks of violent hæmorrhage, that, after all other means had failed, the actual cautery was resorted to, and with success.

Old and debilitated men are not unfrequently received into the Richmond Surgical Hospital labouring under a peculiar form of mortification of the

penis, which in no instance could I trace to a venereal origin. The species of gangrene of the penis to which I allude is not preceded by any marked symptoms of inflammation; at least if inflammation does exist at any period, it is in a degree so slight as to be generally unnoticed by the patient. The appearance of actual mortification is the first subject of alarm, and so great is the apathy with which such patients are affected, that even this is unattended to until a considerable portion of the penis has sphacelated.

Patients of this description are seldom able to give a satisfactory detail of the history of the case, and they uniformly exhibit an indifference in regard to the origin and consequences of their disease which is quite unaccountable. As far as I have been able to ascertain, the affection commences with a slight oedematous thickening, accompanied with some degree of soreness of the prepuce; in a few days a black spot is observed on or near the extremity of it, which gradually spreads without much pain, until the entire penis is destroyed; in some the gangrene extends to the scrotum and pubes, but most commonly the patient dies before this can occur.

During the progress of this disease the patient is extremely low and weak; his countenance pale and cadaverous; his tongue dry and covered with a brown crust; his pulse languid and often irregular, with a cold clammy moisture on the extremities; in some instances the bowels are inactive, but towards the lat-

ter end their liquid contents are discharged involuntarily. Patients affected in this way seldom complain of severe pain, on the contrary I have remarked, that they appear very much at ease, and although they do not sleep except when under the influence of an opiate, will often remain for several hours together without shewing a disposition to move or make any exertion ; and they are evidently annoyed and irritated by being compelled to take food or drink, or to assist in changing the applications made to the diseased parts. For a few days preceding death, they are incoherent, with a low muttering delirium and subsultus tendinum, then the local disease extends more rapidly, and the sloughs are much more offensive than at the commencement.

This is clearly a disease of debility, and arises more from a morbid state of the system at large than from any local disease, although it is probable some slight irritation may cause the gangrene to fix on the particular part.

In the treatment of a patient labouring under this complaint, our exertions must be chiefly employed in restoring and supporting his strength as much as possible ; this object is best attained by a liberal allowance of light nutriment and wine, which his attendants should be directed to administer very frequently. I have repeatedly tried the Peruvian bark in these cases, in all its forms, without benefit, and that medicine has so often disagreed with my patients that I have ceased to prescribe it

where wine and nutritious broths can be taken in reasonable quantities.

From the exhibition of opium in cases of this peculiar form of mortification of the penis, I have witnessed the most favourable results; and I am certain that the lives of several of our hospital patients have been preserved by the efficacy of this medicine alone. After the state of the bowels has been regulated, we generally commence the use of opium, by directing one grain of the extract to be taken every sixth hour, and according to circumstances, gradually increase the dose during the two or three first days, until the patient takes a grain and a half every third or fourth hour. I have seldom found it necessary to exceed this quantity; but in extreme cases, and particularly if the patient's bowels were too free, two grains of opium have been administered every third hour until a slight narcotic effect was induced.

Should the bowels become torpid, an effect which opium in large doses very generally produces, a small quantity of aloes, or of the compound extract of colocynth, may be combined with it; or the opium pill may be washed down with three or four table spoonfulls of the camphorated senna mixture of the hospital.

By the judicious selection of local remedies, and their careful and regular application in this most formidable disease, much good may be effected; sti-

In a succeeding volume of this work I shall lay before the public a detailed account of ulcers on the male organs of generation, as I have seen them in the Lock and Richmond Surgical Hospitals: at present I shall merely state, that in explaining their varieties, the following circumstances require attention:

*1st. The situation of the ulcer, and the structure of the part affected.*

The external male organs of generation consist of so many different kinds of structure, that it is reasonable to infer that ulcers must vary in their visible characters according to the texture of the parts which they occupy; thus a chancre on the glans differs from the same affection on the prepuce, and a chancre on the frenum or internal surface of the prepuce, differs very considerably from a chancre on its external surface, or on the scrotum. These facts were strongly stated by Mr. Hunter; but his observations do not appear to have made a sufficient impression on modern practitioners.

*2dly. The mode of application of the virus.*

The manner in which the venereal poison is applied to a part, must greatly influence the form and progress of the ulcer. If applied to the sound skin, the chancre may assume what is considered as its legitimate form, and its progress will be slow. If the virus comes in contact with a raw surface, as in the act of coition the frenum or edge

be lacerated ; if there is an excoriation, an herpetic eruption or any other cutaneous disease or ulcer of the penis, the application of infected matter to such surfaces may be expected to give rise to appearances in which it is probable none of the nominal characteristics of chancre will be recognized, and to which inflammation and phagedenic ulceration will be very likely to succeed.

*Sdly. The age and habit of body of the patient.*

The first appearance and advancement of chancres will be in a great degree retarded or accelerated by peculiarities in the habit of body or mode of living of the patient. It is not to be supposed that chancres will accurately correspond in their course, and in their characters, in patients who are young, robust and plethoric ; and in those who are advanced in life, whose constitutions are diseased or debilitated, or who are addicted to dissipation and intemperance. In some persons the disease will appear in a few hours after exposure to infection ; in others several days will elapse before any symptom is observed ; and it is well known, that inattention to cleanliness, and many other irregularities, will not only quicken the progress of the complaint, but will render it malignant and severe. In a healthy young man of a full habit, or in a person of much excitability, violent inflammation may rapidly succeed to the appearance of a chancre ; whereas in the opposite state of  
ill often continue for many  
undergoing any per-  
will not be denied that

the susceptibility of individuals to become infected by the venereal poison is very different, and is obviously so even in the same person at different periods, and under different circumstances.

*4thly. The stage of the complaint in the female, by whom the disease has been communicated.*

This is a point which, in our hospital investigations, can very seldom be ascertained; yet it is one which, in my opinion, must have great influence in modifying appearances on the male organs. It is well known that constitutional syphilis rarely gives rise to any affection of the penis, unless that organ shall participate in a general cutaneous eruption; while in females, ulcers and excrescences on the labiæ, &c. are frequently produced by the contamination of the system. This is particularly exemplified in the case of a nurse infected by a syphilitic infant, who is first apprized of her system being diseased by the appearance of small condylomata (too often mistaken for chancres in these cases) on the apposite surfaces of the labiæ, whence they extend to the groins and nates.\*

\* Some years ago a woman, aged seventy years, resident in Smithfield, whose daughter had lain-in of a diseased child, ignorant of the nature of the infant's malady, undertook to spoon-feed it, as its mother, being attacked with fever immediately after delivery, was unable to nurse it. In a few days blotches and sores broke out on different parts of the child's body, and on the nates and thighs; the child, became hoarse, swallowed with difficulty, the tongue, the angles of the mouth, even the eyes ulcerated, and it died before it was a fortnight old.

The poor woman brought her grandchild to the hospital a few

The surgeons of the Westmorland Lock Hospital have been long acquainted with the fact, that a mor-

hours before its death; she was told nothing could then be done to relieve it, and was desired to return, should she discover any symptoms of disease on herself. In three days she applied, in consequence of a rash on her arms; it was like an itch; she was directed to bathe them frequently in warm water; to take some opening medicine, and to attend in three or four days more. Before her next visit to the hospital, she had excrescences on the labiæ, a few elevated blotches on her breast and back, and a deep ulcer on each tonsil. This woman was speedily cured by the mercurial treatment.

The wife of a decent farmer, who resides about four miles from Dublin, undertook to suckle a child for a citizen. She came to town to receive the child at its birth, and returned with it at the expiration of a week. An eruption appeared early on the thighs, abdomen, and nates of the infant, to which no importance was attached. The nurse's arms broke out with a teasing itchy rash; her daughter, a fine healthy girl, twelve years old, who occasionally dressed and carried the child, her husband, and her own infant, aged four months, whom she was also suckling, were all affected in the same way. They were told that they had taken the itch, and accordingly used sulphur both externally and internally without much benefit. The infant's complaints rapidly increased; small tumors formed on the nates, thighs and legs, which quickly assumed a livid colour, and having sphacelated, degenerated into offensive ulcers. The mouth and throat were ulcerated, and the child died on the day after it was brought to town for my inspection. At this time the nurse had no appearance of disease, except the rash, which had by no means a syphilitic character, and a slight excoriation about the nipples. In about eight days after the death of the infant, the whole family applied to me. The nurse had then several ulcers on the areolæ of the nipples, and numerous copper-coloured blotches on her breast, back and arms, mixed with the original eruption. She complained much of soreness and swelling of the labiæ, the surfaces of which were



bid state of the female genitals may exist for several months, without preventing male intercourse ; and that, thus affected, unfortunate prostitutes continue their wretched occupation until their complaints have proceeded to an extent which compels them to seek for relief. It is scarcely to be expected that symptoms communicated by females labouring under

nearly covered with small condylomatous excrescences. Her infant had a few blotches on its limbs, was observed to be a little hoarse when it cried, and the angles of its mouth were slightly irritated. The girl had several excrescences on the labiæ and between the nates, with extensive and painful excoriations ; and the husband of the nurse was affected with deep and irritable ulcers on the corona glandis, a very general tubercular eruption, particularly distinct between the shoulders, and an ulcer on his left tonsil. This man informed me that the affection of the penis was the first symptom which appeared on him ; and he declared to me in the most solemn and apparently ingenuous manner, that he had been a strictly faithful husband. They were all admitted into the Richmond Hospital, and were cured by the exhibition of mercury.

A country practitioner lately informed me, that an unmarried young woman of most correct conduct and unblemished character, who resides with her parents in his vicinity, was severely affected with condylomata on the labiæ and contiguous parts. She was brought for his opinion and advice by her father, in consequence of another professional gentleman indelicately declaring that she had contracted a venereal complaint, and that it must have been the result of illicit intercourse. However my friend was perfectly convinced, after a patient inquiry, that the disease was communicated to the girl by a new-born infant, which she took charge of during the indisposition of its mother, the wife of a disbanded soldier who lived in her neighbourhood, and who was ascertained to have syphilis. This girl was subjected to a course of mercury, and recovered very soon.

syphilis in its different stages, will exactly resemble each other ; and it seems not improbable that the varieties of primary affections on the male organs of generation may thus be satisfactorily accounted for.

As it is my intention to resume this part of my subject with as little delay as possible, it would be an useless anticipation to say much at present on the treatment adopted in my wards in the Richmond hospital, for the cure of ulcers of the male genital organs, which appear to arise from a venereal infection. Recent publications, however, induce me to enter my protest against the conclusion, that we ought to discard mercury as an antivenereal medicine ; these publications seem to me only to prove, that mercury has been too often injudiciously administered.

We often hear of the spontaneous cure of syphilis, and we occasionally meet with instances in which venereal diseases will go through a certain course, and then disappear, without the aid of mercury ; but such efforts of the constitution, or modifications of these complaints, which are irregular and hitherto not fully explained, ought not to influence our general practice.

I have long looked upon mercury as capable of exciting too kinds of action in the system, easily distinguishable ; one salutary, the other morbid. When the first is produced, a peculiar fever is excited, ac-

accompanied with thirst, headach, and frequency of pulse; the salivary glands become enlarged, and their secretion considerably increased, and during these efforts venereal symptoms gradually disappear. But when the constitution of the patient resists this action, which is very often the case, if mercury is persevered in, it will have no effect on the disease, or it will impart to it new properties and characters, which may render it more obstinate and untractable. The state of the system thus induced is very different from that described above; the patient becomes languid and oppressed, with sighing and palpitation, and startings from his sleep; he has no desire for food, and his pulse becomes frequent, and sometimes irregular. The salivary glands are but little, if at all, excited; a slight degree of soreness takes place in the gums, or they become spongy, and ulcerate along their margin: and it is remarkable, that this affection of the gums will often entirely subside, return, and again subside at irregular intervals, although mercury has been continued without interruption, or perhaps administered in augmented doses, and in the most active forms.

When the deleterious effect of mercury has been once established in the system, it is surprizing how long it will continue to operate. I have frequently detected it in patients who had not taken a single grain of that medicine for several years; the mercurial action will even cease entirely for a time, and be again called forth by exposure to cold, by privations, or by intemperance; and persons thus affected will ex-

perience the same sensations as if they were actually using mercury, and on the eve of salivation.

It is the duty of the surgeon to observe with attention and accuracy these several effects of mercury, to administer it with a frugal hand, to persevere in it when he finds it useful, and instantly to discontinue it when even a tendency to its morbid action is evinced. By adhering to this rule, for some years past, I have had but few cases of mercurial diseases consequent on my own treatment; and I am inclined to believe, had a similar rule of practice been more generally adopted, that the attempts lately made to cure syphilis without mercury would have been superfluous.

It may be inferred, from a perusal of many ingenious papers on venereal diseases, and on the use of mercury, lately published, that a great revolution had been suddenly effected in this branch of surgical practice, and that until now all affections of the genitals succeeding to intercourse with the diseased, were believed to be syphilitic, and required mercury for their cure. This impression, however, in justice to many respectable individuals in the profession, with whose practice I am acquainted, and to whom I am much indebted for information on the subject, I feel myself called upon to do all in my power to prevent; being convinced that every surgeon of experience in Dublin is aware of the danger which may arise from the profuse and indiscriminate employment of mercury, and that many ulcers and other affec-

tions of the penis may be successfully treated by local remedies alone.

So long ago as the year 1797 Mr. Henthorn, the senior Surgeon to the Westmoreland Lock Hospital, was so strongly impressed with the opinion that mercury was by no means applicable to all forms and stages of venereal diseases, that he established certain principles in his practice, which, with very little alteration have been adhered to by his pupils ever since. The following general rules for the treatment of the early stages of the venereal disease, were drawn up from his clinical instructions during the years 1799, 1800, and 1801, when I was one of his dressers in the hospital.

1. Mercury ought not to be administered in any affection of the penis during the existence of acute inflammation or gangrene.

2. In sloughing and phagedenic ulcers of the penis, and in very irritable or painful primary ulcers, mercury is inadmissible.

3. Excoriations of the penis will generally be cured by simple lotions: after the excoriations have cicatrized, ulcers often remain, which may require mercury for their cure.

4. If ulcers of the penis do not heal speedily, or assume a healthy aspect under a mercurial treatment; or if they should spread during the use of

mercury, that medicine must be discontinued, and change of air, with the nitrous acid, or sarsaparilla, recommended.

5. In the commencement of bubo, mercury may be administered, and is often auxiliary to the resolution of the tumor; but, if the inflammation of the gland increases, the disease must be treated as common phlegmon; mercury must be omitted, and not again employed until the tumor has subsided; or, if it has suppurated, until the ulcer has almost healed. All ulcerations which succeed to buboes will heal more speedily where mercury is not exhibited; and mercury ought never to be administered in any case of extensive ulceration in the groins; those affections are always tedious, and must be treated with nitrous acid or decoction of sarsaparilla. Removal from the hospital, country air, and nutritious diet, are indispensable.

*(To be continued.)*



**PART II.**

**MISCELLANEOUS COMMUNICATIONS**

**ON**

***MEDICAL AND SURGICAL DISEASES.***





**A CASE  
OF  
OBLITERATED AORTA,**

**BY  
THOMAS GOODISSON, M. D.**

**WICKLOW.**

**WITH  
SOME ADDITIONAL OBSERVATIONS,**

**BY  
PHILIP CRAMPTON, M. D. F. R. S.**

**SURGEON-GENERAL TO THE ARMY AND FORCES IN IRELAND.**

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**THE** permanent obstruction of any of the great arteries, by a natural process, must be esteemed as one of the most surprising and important changes which fall within the sphere of pathological inquiry.

Facts of this kind rise in interest and importance in proportion as they are frequently observed, since every new instance serves either to increase our confidence in the resources of nature, or materially to extend the boundaries of art.

The history of the operations which have been performed for the cure of external aneurism, and the

two cases of obliterated *thoracic aorta* already on record, go far to establish the general sufficiency of collateral circulation for the purposes of the animal economy; but heretofore the abdominal aorta has not been found impervious, and this pathological desideratum the subjoined case most distinctly supplies. \*

For this valuable communication, as well as for the preparation to which it refers, I am indebted to the kindness of Doctor Goodisson, of Wicklow.

“ *Hospice de la Pitié a Paris,*  
*April, 1818.*

“ Upon endeavouring to trace the origin of the inferior mesenteric artery, in the body of a female subject (which had been brought to this hospital from the Hotel de Dieu, amongst many others I discovered a hard tumour; which, from its situation, puzzled me not a little at first, being directly placed upon the line of the aorta; and which, upon more minute examination, I found to be a diseased state of this vessel, which, upon still further inquiry, I found to be obliterated from the origin of the inferior mesenteric artery downwards, for the remainder of its length; together with the greater part of the iliacs, on each side, the cavity of that on the left side being obliterated to its bifurcation into external

\* “ With respect to the aorta in the abdomen, I have met with no instance in the human subject of its obliteration or contraction.”

*Cooper and Travers's Surgical Essays, p. 102.*

and internal, and that on the right, to more than one-half of the length of the common iliac.

The artery lay close, and was firmly attached to the spine. It had precisely the appearance of the trachea; being rendered flat upon its posterior surface, but preserving anteriorly its circular, or convex form.

The iliac veins were so intimately connected with the arteries, as to cause considerable difficulty in their removal.

There was a large quantity of gelatino-cartilaginous matter surrounding that part of the aorta and vena cava, together with the portions of the iliac arteries and veins, which were included in the disease.

The heart, together with the aorta and diseased parts, having been removed from the body, and the internal surfaces of the auricles, ventricles, and that of the aorta, being exposed; the following observations were made—

The corpora sesamoidea of the semilunar valves of the aorta were considerably enlarged, and a blush of inflammation appeared to have formed upon them.

In the mitral and tricuspid valves, the appearances remarked by M. Corvisart, under the denomination of "vegetations," were very manifest. In all other respects the valves of all the cavities and the vessels

appeared healthy, no depositions of ossific matter having been formed.

The aorta, at its arch, was considerably expanded, so as to be nearly double its natural size; and, if compared with the relative size of the vessels in the extremities in this subject, it might be said to have been fully double.—Internally it was studded with gross patches of bone, the principal situation of which was in the neighbourhood of the origin of the vessels supplying the superior extremities. The depositions of ossific matter were interspersed here and there, downwards along the course of the artery; but neither thickly spread, nor of so gross substance as on the part before mentioned.

Nothing more, of any particular importance, appeared in the remaining tract of the artery, excepting the increased size of the vessels given off from it, and more particularly of the lumbar arteries, until the diseased part came under inspection—and here there was considerable difficulty encountered in opening the obliterated part, the sheath of bone being very thick and strong. The external appearance of the artery at first led me to think that an enlargement of its cavity existed; but this was not the case at the time of the examination, whatever might have been its state formerly. This appearance was owing to the formation of the case of bone externally, and to the formation of gelatinocartilaginous matter internally.

The bony sheath encased the artery for the space of about two inches, and was filled with a firm fleshy substance, which had the appearance of the muscular fibre of the heart. This substance was prolonged upwards, beyond the bony sheath, and adhered firmly to the coat of the artery.

The coats of the artery, at the diseased part, were separated, the internal coat having become the medium for the deposition of the ossific matter, had been literally converted into bone.

Upon tracing the arteries given off from the aorta descendens, the following observations were made ;

The intercostal arteries (and in particular that one which takes its course along the last true rib.) were found to have been very much increased in size, and formed considerable anastomoses with the mammary artery, which was itself much enlarged.

The spermatic arteries were \* immensely increased in size and their course was rendered very much contorted and spiral, so as to give them a very beautiful appearance, not unlike the convolutions of the injected vas deferens of the testicle. Their course was consequently easily traced into the pelvis, but the uterus having been previously removed, it became impracticable to pursue them farther.

\* It may be proper to observe here, that the uterus was in the unimpregnated state.

The lumbar arteries which passed between the fourth and fifth vertebræ were enlarged prodigiously, and had by their constant action caused an absorption and consequent enlargement of the channel along which they passed.

The sacra media (had been obliterated altogether,) but its place was supplied by a small vessel which passed behind the diseased part of the aorta, pretty much in the usual course of the sacra media itself; the origin of this vessel could not be traced, by reason of the aorta having been removed before it had been discovered.

#### NEW CIRCUIT OF THE BLOOD.

The mammary arteries were a good deal enlarged, and like the spermatic arteries, their course was beautifully marked by the serpentine convolutions which they formed. That of the left side was joined by a considerable branch from one of the intercostals at the superior anterior spinous process of the ilium. This branch took its usual course from the aorta, passing immediately along the external edge of the psoas parvus one-half of its length, then passing between the transversalis and obliquus descendus, and continuing its course between those two muscles, till arriving at the before-mentioned point, it joined the mammary (or epigastric) together with a branch of considerable size, passing from between the fourth or fifth lumbar vertebræ and another smaller one, which, passing across at right angles, the whole were con-

veyed together by the medium of the circumflexa ilii to the usual origin of this vessel in the external iliac.—It is almost needless to remark here, that the circumflexa ilii was considerably enlarged in size ; indeed, so much so as very nearly to equal the size of the external iliac itself.

The supply of the right extremity was very similar to that of the left, except that some little difference existed in the course, and relative size of the supplying vessels. Not so, however, with respect to the course which the blood pursued, after the anastomosis at the ilium on this side.

From this point it was conveyed across the lumbar muscles, by an enlarged vessel, taking nearly the direction of the wing of the ilium, till having come within an inch of the spine, it made a turn at nearly right angles, and plunging suddenly into the pelvis, it opened into the external iliac, a little below the bifurcation. The circumflexa ilii of this side did not appear of more than ordinary size. These arteries in their passage across the muscles of the lumbar region on each side partook, more or less of the spiral course, remarked as having existed in that of the mammary and spermatic arteries.

The inferior mesenteric artery at its origin was completely closed. The part of it which remained pervious put on a conical form ; the apex of the cone looking upwards. Unfortunately, the intestines had been removed, and with them the remainder of the





**PART II.**

**MISCELLANEOUS COMMUNICATIONS**

**ON**

***MEDICAL AND SURGICAL DISEASES.***

## THE THORAX.

The pericardium contained a large quantity of the liquor pericardii, to the amount of about four ounces.

The heart appeared of natural size, with some flakes of coagulated lymph here and there interspersed, but very firm and strong, denoting inflammation of ancient date.

The left lung appeared perfectly healthy, without even adhesion, excepting a very trifling one at its superior extremity. The right was very much diseased, and firmly attached to the pleura costalis; in so much, as that considerable difficulty was experienced in the separation of it. On examining its internal structure, it proved tuberculated extensively, and three large abscesses had formed, one of which, by bursting into the trachea, proved the immediate cause of death.

## THE HEAD.

The brain appeared perfectly natural, with the exception of a small cluster of hydatids, which was attached to the plexus choroides in the ventricle at the left side. The skull was remarkably thick, dense, and heavy.

The spinal canal exhibited nothing remarkable.

## GENERAL OBSERVATIONS.

The general appearance of the body could not be said to indicate any thing of disease, but rather on the contrary, it appeared more healthy than otherwise. Indeed, it drew forth the remark of my fellow-students, as well as my own, as having been the best and cleanest subject which had been introduced into the dissecting room during the season. And those remarks were made before the body had been opened, and consequently before the diseased structure was discovered.

The lower extremities appeared perfectly sound and full, and not at all emaciated. This, however, is not to be wondered at, when we consider the period which must have elapsed since the final establishment of the obstruction, and which is evidently demonstrated to have been at some considerable time back; first, from the extent of the obliterated vessels; secondly, from the deposition of matter externally upon the diseased part of the vessel, which matter was almost wholly converted into cartilage, and must be supposed to have been formerly coagulable lymph, thrown out in consequence of the inflammation produced by the pressure of the column of blood upon this part of the artery, at the time of the obstruction having formed,—and which lymph must have taken some years to assume the form under which it appeared; lastly, from the deposition of bony matter on the superior part of the vessel, which may probably

be supposed to have originated, in consequence of the increased action produced by the pressure of the blood on this part of the artery, at the same period.

The subject was brought to the dissecting room two nights before the examination took place ; so that it was examined with the advantage of being perfectly fresh (not being altogether 50 hours dead,) and the observations made upon its appearance cannot therefore be liable to the errors often attendant upon the examination of bodies some time after death. This observation I thought it the more necessary to prefix to the next remark.

The muscular fibre appeared very soft and fragile, so as to render it extremely difficult to discover the arteries, in prosecuting the usual routine of surgical operations practised by pupils upon bodies in the dissecting rooms.

The arteries of both the superior and inferior extremities appeared of rather diminutive proportion.

It is with no small degree of regret that I have to state, that all my endeavours to trace this woman's case during her stay in the hospital, or her history previous to her arrival there, proved ineffectual. Unfortunately, the mortality is so great, and the number of bodies removed from the hospitals so excessive, as to render it a very difficult matter to have any of the bodies recognized after they have been removed from the hospital ; and so it proved

in this instance, for I was not able to learn any thing more than that she had been brought in the cart of the Hotel Dieu."

" T. GOODISSON."

I have in the first place to bear testimony to the general accuracy of Dr. Goodisson's description, which I have very carefully compared with the preparation to which it refers. Those anatomists who have had the advantage of examining aneurisms which have undergone a spontaneous cure, will have no hesitation in referring the obliteration of the aorta in Dr. G.'s case, to the effects of such a process, "*The firm fleshy substance, having the appearance of the muscular fibres of the heart, and which filled the aorta for the space of about two inches, which was prolonged upwards beyond the bony sheath, and adhered firmly to the coat of the artery,*" very well describes the condensed fibrin which lines the walls of all old aneurisms, and ultimately fills up their cavities when the process of a spontaneous cure has been completed; but by cutting longitudinally through the diseased portion of the artery, and turning out the condensed coagulum with which it was filled, I was enabled to ascertain the real nature of the changes which the vessel had undergone previous to its obliteration.

The internal coat, covered with steatomatous and earthy concretions, completely lined the cavity of the dilated portion of the artery; the dilatation itself consisted of three irregular pouches, which proceeded

from the anterior and lateral surface of the vessel. It is obvious, therefore, that the disease commenced with dilatation of the artery in consequence of a previously diseased and weakened state of its coats; that the coats had suffered neither ulceration or rupture was evident, since (when the coagulum was detached) the internal membrane was found smooth and unbroken, and its surface presented precisely the same diseased appearances which were found on the internal coat of the aorta, immediately above and below the dilatation. What the circumstance was which determined the blood to coagulate in so small a sac, (if such the dilated artery can be called,) and so much within the influence of a great current, it is difficult to conceive; but the fact is certain, and must, whether in a physiological or a practical point of view, be considered as one of the greatest importance.\*

It appears then that the obliteration of the aorta in the present instance, was effected by a totally different process from that by which a similar effect was produced in the cases mentioned by Mr. Parist and Mr. Graham†; in neither of these instances "were the coats of the artery thickened, or in any way diseased;" and the appearance was exactly such "as if a ligature had been tied tightly round the vessel." Af-

\* Mr. Hodgson observes in his valuable work "On Diseases of the Arteries," &c. that laminated coagulum is almost universally found in aneurisms in which the coats of the arteries have *given way*, but in those sacs which consist either in a general or partial *dilatation*, he had never met with it." p. 82.

† Dessault's Surg. Journal, vol. 1.

‡ Med. Churg. Transact.

ter all that has been done in the investigation of the diseases of the arteries, and the improved methods of treatment which have arisen out of these inquiries, I cannot help thinking that much is yet to be achieved ; and although we have not as yet been able to excite by art that natural process which terminates in the gradual obliteration of a great artery without the danger arising from ulceration of its coats, it is in such an inquiry, a material step in advance to ascertain that a process of this kind may actually be excited, and that too under circumstances which from reasoning, we should conclude to be the most unfavourable to such a result.



**A CASE**  
**OF**  
**FEMORAL ANEURISM,**  
**CURED BY TYING THE EXTERNAL ILIAC ARTERY,**  
**BY SAMUEL WILMOT, M. D.**

**MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, ONE OF  
THE SURGEONS OF DR. STEEVENS'S HOSPITAL AND OF THE  
CHARITABLE INFIRMARY, JERVIS-STREET, AND  
LECTURER IN SURGERY, &c. &c.**

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**MICHAEL M'DONOUGH**, aged thirty-two years, of middle stature, thin, and of a dark complexion, by trade a coach-maker, was admitted into the Charitable Infirmary in Jervis-street, on Tuesday 7th July, 1818, on account of a large femoral aneurism, situated within an inch of Poupart's ligament, and extending almost entirely across the upper part of the thigh. It measured, from above downwards, more than six inches. The tumor felt rather hard and resisting at all points, except a small portion of it towards the superior and anterior part; here it was much more prominent, and an evident fluctuation could be felt. The sac was thin at this place, and the pulsation was much stronger. There was no

discolouration of the integuments covering the tumour. The limb was entirely free from cedema. The superficial veins were more turgid than natural.

On inquiring into the history of his case, he gave the following account :—That he was always remarkably healthy ; had a venereal complaint about ten years ago ; has been married for some years and has children ; he cannot account for the appearance of this disease ; says he might have received a hurt at his business, but was not conscious of it ; perceived, about three months back, by chance, a small lump, which beat very strongly, about four inches below his left groin. It gradually grew larger without giving him any inconvenience, and, being ignorant of its nature, he continued at his work until about three weeks ago, when he was compelled to remain at home, owing to an increase of pain and throbbing in the tumour, together with a numbness in the thigh and leg but particularly in the knee. From this period the tumour rapidly increased ; his rest was now interrupted by the pain and beating in the tumour. His pulse, on the day of his admission, was 96, but free from any thrill or inequality ; no palpitation or abdominal pulsation. The frequency of his pulse in all probability originated from mental agitation, owing to his being made perfectly acquainted with the nature of his complaint, and with the necessity of an operation.

Wednesday morning, 10 o'clock ; he spent a restless night ; complained of heat and pain in the

tumour, and of a pain shooting through his knee; tongue white; bowels confined; pulse 98. The tumour felt more tense, and the pulsation was not as strong as it was two days ago; ordered a dose of castor oil and a draught, to be taken at bed time, composed of tincture of hyoscyamus gtt. xxx, tincture of digitalis gtt xx, cinnamon water, ʒj. and a cold embrocation to the tumour. Thursday morning, felt himself much better; passed a quiet night. He made up his mind to the operation which I performed this morning, assisted by Messrs. Dease, Colles, and Cusack.

In commencing the operation I made the course of the internal iliac artery my guide. An incision nearly four inches in length was made parallel to this vessel, and a little to its iliac side. The cut began a little above Poupart's ligament, and was continued upwards to the extent mentioned. This incision divided the skin and superficial fascia. The aponeurotic expansion of the external oblique muscle being now exposed, I divided it in the direction and to the extent of the external wound. The lower part of the internal oblique muscle was now brought into view, and the spermatic cord could be distinctly seen. I introduced my forefinger at the inferior margin of the internal oblique and transverse muscles, so as to protect the peritoneum, and with a bistory I divided them upwards to the extent of two inches. I found the fascia transversalis between me and the peritoneum. This being divided sufficiently to allow me

to pass in two of my fingers, I detached the peritoneum by pushing it inwards, taking care at the same time to separate only as much of it as was necessary to allow the artery to be taken up.

The artery could now be distinctly seen covered by its thin investing fascia. At a distance of about an inch and a half above Poupart's ligament an opening was made into this fascia, by raising it with a pair of forceps on the anterior part of the artery, and then cutting the raised portion close to the forceps. I enlarged this opening with the point of a director, just sufficient to allow the aneurism needle to pass. The ligature was now put round the artery without disturbing it in the least, or interfering with either vein or nerve. The ligature was composed of four silk threads waxed. In tying the ligature more force was required than I had ever occasion to use in tying any other artery; one end of the ligature was cut close to the knot, and the other brought out of the wound. The pulsation immediately ceased on tying the ligature, but there was no perceptible diminution in the size of the tumour. The peritoneum was now replaced, and its protrusion prevented by keeping the lips of the wound in contact by means of suture and sticking plaster.

Thursday evening, 9 o'clock—says he passed a quiet day; the pain in the tumor and knee have ceased; feels a numbness in the thigh and legs; temperature of the limb natural, and the same as that of the other; complains of some palpitation; pulse 98; *Reptr. haustus ut antea.*

As there were but few circumstances worthy of noting during the progress of this case, I shall not trespass on the time of the reader by relating the occurrences of each day, though I have a very accurate journal kept by Mr. Howse, an intelligent pupil of mine. The tumor began evidently to decline after the second day from the operation. The temperature of the limb varied very little at any time. Whenever there was any perceptible alteration, it was generally about the foot. The patient's feelings were not to be depended upon with regard to the absolute heat of the part; he frequently complained of cold when the part was warm to the touch, and vice versa. On Sunday, the 12th July, when the dressings were removed, the wound looked well; no suppuration; some bloody serum discharged; a small portion of the upper part united. On the Wednesday following there was a discharge of some matter very thick and tenacious, more like mucus than pus. The patient complained this day of a good deal of pain in the legs, which I attributed to his imprudently stretching the limb, which had been placed in the flexed position after the operation. He frequently, during the first week after the operation, complained of palpitation; one night it was very severe; he said he felt as if he was raised from the bed. The draught with hyoscyamus and digitalis always gave him relief. After this period his improvement became very rapid. Wednesday, 22d July, the fourteenth day after the operation, said that he enjoyed better health than he had done for some months before the operation. I allowed him

now a more generous diet ; at first I thought it advisable to keep him low, though there was never much fever, nor any tendency to peritoneal inflammation. The tumor at this time had lessened very much ; the most evident absorption had taken place at that part where it was most solid.

The ligature was retained uncommonly long in this case, and came away in a very unusual manner. After the sixteenth day from the operation I began very anxiously to look out for the lengthening of the ligature, which did not take place in the slightest degree even up to the thirtieth day. On the morning of the thirty-first day I was surprised, and at the same time gratified, by finding the knot of the ligature on the surface of the wound, and at some distance behind, that portion of it which was retained at the surface. When I raised the knot with a pair of forceps, the entire of the ligature came away.

It is only six weeks since the operation was performed, and the tumor is almost entirely absorbed. The patient's health and spirits are completely restored, and there is every evidence of the circulation in the limb being carried on by the anastomosing branches in the most perfect manner. The limb enjoys the same temperature as the other, is equally plump, and there is no deficiency in its strength. The patient walks about the ward with the greatest freedom, and can run up and down stairs with perfect ease.

It has been stated that the operation of tying the external iliac artery is difficult to perform, and full of danger in the execution of it; but I can with confidence and truth assure such as have not performed it, that it by no means deserves such a character. When Mr. Abernethy first performed this operation it was condemned by some as a rash and useless attempt, while others disbelieved that it was ever put into execution. The results, however, of Mr. Abernethy's two first cases, though unsuccessful, clearly shewed that it was an operation highly justifiable, and he has now the gratification of seeing it practised with success in every country where surgery has made any progress.

As a proof of its success let us look to the journals of the cases of inguinal aneurism, and we shall find, if I am not much mistaken, that the recoveries after this operation have been more frequent, in proportion to the numbers operated upon, than after tying the femoral artery for popliteal aneurism. If this statement be found correct, I think it not improbable that, before long, Surgeons will prefer taking up the iliac to the femoral artery in cases of popliteal aneurism. There is, I believe, no anatomical objection to such preference; and there are cases mentioned of the iliac artery having been tied successfully in aneurisms below the profunda, where the tumor had extended so high as to prevent the femoral artery from being operated upon. I am aware that this practice is liable to objection, on the grounds that in cases

where the iliac operation fails we have seldom any chance from a second operation ; but this objection will, I apprehend, have very little weight with those who recollect the more uniform success of the iliac operation, and who are aware that very few indeed have been saved by tying the femoral artery higher up, when the first ligature has failed of success.



A CASE  
OF  
**APOPLEXY,**  
IN WHICH THE  
FLESHY PART OF THE HEART WAS CONVERTED  
INTO FAT.

BY J. CHEYNE, M. D. &c.

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**DOUBTS** having been entertained of the conversion of the fleshy part of the heart into fat, and only one dissection, \* in as far as I know, having been published illustrative of that very curious morbid alteration, the following case and dissection have been thought of sufficient importance to meet the public eye.

In this dissection, although no chemical experiment was made in proof of the matter into which the heart was converted being fatty, I have no doubt that it was

\* See a dissection, illustrative of this morbid change, in an elaborate paper on inflammation of the heart, by Dr. Duncan, jun. See *Edin. Med. and Surg. Journal*, Jan. 1816.

so. Placed along side of the fat which lay over the ribs, I could perceive no difference, save that it was softer and more easily torn, and rather of a deeper yellow ; the substance in question communicated a greasy stain to paper, and the animal oil in viscous drops adhered to the knife used in dissecting the heart. I was not, at the time of dissection, aware that the morbid change was so uncommon, or that the specimen which lay before me was perhaps the most complete exemplification ever witnessed of the conversion of the flesh of the heart into fat.

The patient certainly died of apoplexy ; and apoplexy in this case must have depended upon increased action of the vessels of the head. The heart itself was apparently incapable of communicating much impetus to the circulating mass.

Certainly the dissection would have been more complete had the liver been examined : at the same time I may observe, that although the function of the liver had frequently been disordered during the last ten years of the patient's life, I should not have been surprized had that viscus been found apparently sound. I am persuaded that diseases of the liver, which do not end in structural changes, often produce the greatest disturbance of the constitution, laying the foundation of fatal diseases of distant organs.

A. B. sixty years of age, of a sanguine temperament, circular chest, and full habit of body,

for years had lived a very sedentary life, while he indulged habitually in the luxuries of the table.

This gentleman having had several attacks of the gout in his feet, began a course of magnesia in the year 1813, after which he had only one regular attack of the gout. For many years he had been subject to severe attacks of catarrh, which ended without much expectoration. He had long been subject to œdema of the ankles in the evening; for two or three years before his death (the time could not be ascertained) he had remarked an occasional intermission in the pulse of his heart.

In the latter end of January 1816, he consulted me for a pain in his right side under the false ribs, for which he took calomel at bedtime, and salts in the morning, repeating these once or twice; but he neglected my directions with regard to diet; nay, his appetite being remarkably keen, he ate more than usual, and took at least a pint of port wine or Madeira daily, as was his habit, and this notwithstanding a hard frequent cough, which came on after I was consulted by him.

On the third of February he had walked a good many miles, and came home exhausted, with a fluttering or palpitation of his heart, for he could not well say which, in a degree he had not felt before. He ate as usual, and drank six or seven glasses of wine, which he thought relieved the fluttering. He was sitting at tea about nine o'clock, when he was at-

attacked with a severe fit of coughing, during which he fell from his chair insensible. I saw him in three or four minutes after his fall, and found him with a contusion on the upper and left side of the frontal bone; he was confused, and unable to recollect himself; he was conscious that some accident had befallen him, the exact nature of which he declared himself incapable of understanding. His pulse was extremely irregular and unequal. It bounded quickly for several pulsations, then it paused and went on more quickly, but with less force. He was pale, but none of the muscles were affected with palsy. I lost no time in having blood drawn from his arm to the amount of nearly a pound. He gradually became more collected, but his pulse continued irregular and unequal; his countenance became flushed, the cough occurred in suffocative fits, and he complained of pain on either side of the tuberosity of the occipital bone. Twelve ounces more of blood were drawn about an hour after the first blood-letting, after which the pulse, though it continued equally irregular, was much softer. He complained of the contusion, and of considerable pain behind his ears. He was removed to bed, the heat of the extremities was restored, and fifteen leeches were applied over the contusion, and he took two pills consisting of two grains of James's powder, three of calomel and four of compound extract of colocynth.

On the 4th of February he had several large bilious stools; his understanding was unimpaired, his recollection restored, and he seemed to comprehend

the nature of his illness, and he had a sense of fullness in his head, which led me to order him to lose a few more ounces of blood. It would be tedious and unprofitable to particularize the medicines which were ordered from day to day for this patient ; they consisted of a mild mercurial every second or third day, and squills with ammoniacum, &c. These were indicated by the loaded tongue, scanty high coloured urine and dry cough. The expectoration being restored, the squills were laid aside on the 15th of February, as they produced nausea and extreme depression of spirits, and bitter infusion with tincture of cardamoms and soda was prescribed. On the 19th a horse-radish bath was ordered, in consequence of some slight demonstration of gout. On the 21st he had some smart pain, with slight inflammation in the ball of the left great toe. About this period he submitted with so much dissatisfaction to a reduced diet, and declared himself so much better after food, that we were induced to allow him a couple of glasses of wine, and to encourage him to take carriage exercise. The irregularity in his pulse never ceased. On the 1st of March, he had a return of the suffocative cough and flushing, with some wheezing, which again seemed to demand blood-letting, which was practised with immediate relief. At this period a blister was applied over the region of the heart, which had become the seat of considerable increase of pain, and a discharge was maintained from the blistered surface, by means of ointment of savine and cantharides ; about the 4th of March, the sputa became free and concocted. His tongue at this pe-

riod was for many days furred and of a dark brown colour, as if it had been sprinkled with ground coffee; it was expanded, and its edge was moist. On the 25th of March he began to complain of wheezing, more particularly after exertion, but it sometimes attacked him when he was at perfect rest; his legs and ankles became œdematous, the urine very scanty, much loaded, but without being coagulable by heat. At no period of his illness did his pulse beat more than twelve or fifteen strokes in regular succession. Various diuretics were given; the digitalis was proposed, but he refused to take it. Crystals of tartar, the extractum lactucæ virosæ, nitrous æther, &c. were tried without any benefit.

The symptoms of dropsy rapidly increasing, on the 9th of April, he took a draught of infusion of senna, tincture of jalap and Rochelle salts, which operated largely. On the 10th of April he was found in bed flushed, speechless, and hemiplegiac. How long he had been in that state could not be ascertained, as he had peremptorily ordered his servant not to remain in the chamber with him, and not to come to him in the morning till called. All attempts to relieve him were unavailing; his right side continued powerless, and his attempts to articulate were vain. The only peculiarity in the last period of his illness, which lasted eight or nine days, was in the state of the respiration: For several days his breathing was irregular; it would entirely cease for a quarter of a minute, then it would become perceptible, though very low, then by degrees it became heaving and quick,

and then it would gradually cease again : this revolution in the state of his breathing occupied about a minute, during which there were about thirty acts of respiration. \*

The DISSECTION was made by Mr. Crampton, the Surgeon General, and witnessed by Mr. John Moore and myself.

There was nothing remarkable in the configuration of the body but the great depth of the chest ; the anasarcaous swelling of the inferior extremities was considerable.

The scalp was bloodless. The arachnoid membrane was slightly opaque ; there was some fluid between it and the pia mater, and the vascularity of the latter was increased, more particularly over the middle and posterior lobes of the cerebrum of the left side, where, in a large patch, it was thickened and of a deep red colour. The brain was firm, its cortical substance of a pale drab colour. There were between three and four ounces of fluid in the ventricles.

There were not more than two ounces of fluid in the pericardium. The heart was about three times its natural size. The lower part of the right ventricle was converted into a soft fatty substance ; the upper part was remarkably thin, and it gradually de-

\* The same description of breathing was observed by me in a relative of the subject of this case, who also died of a disease of the heart, the exact nature of which however I am ignorant of, not having been permitted to examine the body after death.

generated into this soft fatty substance. The cavity of the left ventricle was greatly enlarged. The whole substance of the left ventricle, with the exception of the internal reticulated structure and *carneæ columnæ*, was converted into fat. The valves were sound. The aorta was studded with steatomatous and earthy concretions.



**A CASE**  
**IN WHICH**  
**SUFFOCATION**

**WAS PRODUCED BY A PORTION OF SOLID FOOD  
IN THE ŒSOPHAGUS.**

**BY JOHN KIRBY, A. B.**

**MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, SENIOR  
SURGEON TO ST. PETER'S HOSPITAL, AND LECTURER ON  
ANATOMY AND SURGERY AT THE ANATOMICAL  
THEATRE IN PETER-STREET, DUBLIN.**

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**ONE** evening in November 1815, I was called to visit a poor woman who was brought to St. Peter's and St. Bridget's Hospital by some humane persons, who found her in the street in an almost lifeless condition. She was one of those miserable creatures, who feed in our streets upon the mixed offal which they receive from servants. She was greedily enjoying this wretched fare, when a morsel stuck in the œsophagus. When I arrived at the hospital, she was dead to all appearance, yet I opened the trachea above the sternum, and patiently inflated the lungs for a considerable length of time, but to no purpose. At the sides of the neck there prevailed a remarkable fulness, which I could not explain until the parts were afterwards examined.

On the day following, a coroner's inquest was convened, and the necessary dissection was performed by Mr. Michael Daniel. Three large morsels of food were found in the œsophagus: the superior, which seemed the largest, lay immediately behind the cricoid cartilage; the inferior occupied the œsophagus nearly as low down as the upper extremity of the sternum. This morsel contained a piece of bone an inch and a half long, one of its ends being very sharp and pointed. The bone lay obliquely across, transfixing the œsophagus at its left and posterior part, and wounding the right subclavian artery, which, contrary to its usual course and origin, lay in this situation as it passed from the left of the arch of the aorta, where it arose, towards the right shoulder. The surrounding cellular membrane was filled with blood, which accumulating principally at the sides of the neck, had produced the fulness of the surface, a circumstance until now inexplicable. The œsophagus and trachea were both free from blood. The latter was pervious, and did not seem diminished by the pressure of the morsels. The epiglottis almost completely concealed the cavity of the glottis, which was so diminished by the forward inclination of the arytaenoid cartilages, as to be scarcely discernible. The rima glottidis was altogether closed.

I have annexed a drawing of this very interesting dissection, taken from the preparation, which is preserved in my Museum in Peter-street.

This case adds to the list of those which attract us rather by their singularity than by the usefulness of any hints they furnish to the practical Surgeon. It seems, however, to confirm the opinion, that it is not to the mechanical obstructions of the trachea we are to look for the immediate cause of death, when a solid substance is arrested in its descent through the upper part of the œsophagus, so much as to the spasmodic constriction of the muscles of the glottis, which are suddenly and powerfully excited by the presence of the obstructing body.

Neither the wound of the artery, nor the consequent effusion of blood, appear to have contributed to the suffocation.

*Harcourt-Street,*  
*Aug. 17, 1818,*

AN ACCOUNT  
OF AN  
ENDEMIC DISEASE OF CEYLON,  
ENTITLED  
**B E R R I B E R R I,**

BY J. RIDLEY, ESQ.

SURGEON IN THE ROYAL REGIMENT OF ARTILLERY.

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AMONGST the diseases to which the European troops, as well as the natives in Ceylon, are subject, that which has been termed by the native physicians "berri berri," is, from its rapidity and fatal effects, as well as from the peculiarity of its symptoms, most deserving of attention. This term "berri berri," was given to the disease by the Malabar physicians, and designates in their language, that peculiar rolling, unsteady motion observed in sheep when walking; and they compared the motion occasioned by the unsteady gait which persons afflicted with this disease are observed to have, and also the restlessness produced by the anxiety and distressing sensations which are then experienced, to the motion in sheep, which the term "berri berri" expresses.

It generally, indeed almost always, commences with œdematous swellings of the legs and feet, and sometimes of the hands, the throat is frequently swoln and the face bloated, and there is a sense of numbness round the mouth : indeed a general sense of numbness is felt, particularly of the extremities, which are unusually weighty and rigid, (and hence, when walking, the unsteady gait ;) the urine is secreted in diminished quantity ; it is very high coloured, and extremely hot when passing through the urethra ; as the disease advances, a total suppression generally takes place : a sensation of pain and tightness is felt immediately beneath the inferior edge of the sternum, which becomes so distressing, as to induce the patient to solicit that the part may be cut open, expecting to have the tightness relieved by that means. The bowels are generally costive ; the irritability of the stomach is frequently so great as to preclude the use of medicines by the mouth : dyspnœa, which always exists, is particularly inconvenient, when moving quick, or up an ascent, and indeed in all cases, is so urgent as to prevent the patient lying down ; heavy sighing takes place with great anxiety and restlessness, occasioning a continual change of position ; the skin is natural until the advanced stage, when it becomes cold and clammy ; the pulse is sometimes regular and natural ; at other times it is quick and hard, and sometimes it is faltering.

The appearances on dissection are not alike in all cases ; sometimes an effusion of serum is found on the brain, in the cavities of the thorax and abdomen, or

in the cellular substance ; adhesions of the lungs to the pleura, or adhesions in the course of the intestines, are sometimes found to have taken place. The heart, in some cases, is enlarged, and an unusual quantity of fluid is found in the pericardium ; but in other cases none of these appearances are observed : the viscera are, however, generally found inflamed ; the diaphragm particularly so, and in most cases the urinary bladder is inflamed and collapsed, and frequently its coats are thickened.

The approaches of this disease appear to be gradual, for it is generally found, on inquiry, that for two or three days previous to the patient's applying for relief, he has perceived more or less swelling in the legs, attended with lassitude and languor, and a slight degree of difficulty of breathing when walking fast, or ascending a hill. Our soldiers attributing these symptoms to fatigue, or heat of climate, and always entertaining an aversion to an hospital, seldom report themselves until the more formidable symptoms appear.

The general treatment in the very early stage is simple ; a purgative of calomel, jalap, and crystals of tartar, in the first instance, is given ; the legs and feet are bathed in warm water, and afterwards well rubbed with camphor and oil of turpentine, or with the mercurial liniment, and then rolled, with a moderate degree of pressure, in flannel bandages ; a pill composed of one or two grains of calomel and two or three of powdered squills is then given every

two or three hours, and the solution of crystals of tartar as common drink, sometimes made into punch with arrack, or geneva, in preference. Under this treatment the disease is frequently removed in a few days. (Vide Gunner M'Guire's and Bomb. Sheva's cases.)

When, however, the disease advances, it requires the prompt application of more powerful remedies, such as blisters to the back of the neck and to the seat of pain and tightness; the warm bath, frequent fomentations of the legs and abdomen, followed by frictions of mercurial ointment, camphor and oil of turpentine; and, as in this stage, the stomach will not always retain medicine, clysters with æther or purgative clysters are to be exhibited.

When a paroxysm of vomiting, or dyspnœa has been urgent, large doses of laudanum and brandy have been given with very happy effects; and, in many desperate cases, these medicines have suspended those alarming symptoms, and thus time has been obtained for the employment of other medicines. The necessity of diuretics is almost always indicated, and a mixture, composed of half an ounce of nitre and two ounces of distilled vinegar, given in doses of half an ounce, every three or four hours, has been attended with marked and almost immediate relief. The tincture of cantharides has been employed with great success in the native hospitals; and, as an antispasmodic, I was induced to try the ef-

ects of the Tinctura Ferri Murialis. (Vide Tallent and Needing's cases.)

In 1814, in a small garrison, consisting of only about 400 native troops, I had an opportunity of seeing this disease under very aggravated circumstances : they occupied a small fort recently erected on a hill, cleared for the purpose only a few months before. The sick were placed under the immediate charge of a Dutchman, stationed there for the purpose of diffusing the benefits of vaccination, to whom, (he being under my orders) I had, from time to time, given instructions for their treatment, until finding the disease become very alarming, I repaired thither myself. Upon my arrival I found upwards of sixty patients labouring under the disease in its worst form : the daily admissions were numerous, and the deaths amounted to five, six and seven each day. The commandant (the only European) was alarmingly ill with the jungle fever, of which he died in a few days after my arrival, and the vaccinator was so ill of the disease, that it was necessary to remove him from the garrison. To these circumstances (by which the instructions previously forwarded were prevented from being carried into effect) may, in a great measure, be attributed the melancholy state of the garrison. Calomel and squills had been given, and the purgative powder occasionally, but no attention had been paid to other matters of equal importance : the wards for the sick were in a filthy state, and badly ventilated, owing to the natural laziness of the people, added to



the desponding state they were reduced to, by witnessing the deaths of so many of their comrades. The discharges, both alvine and from the stomach, had been in many instances left for two or three days, by the bedside, on the floor, and not unfrequently even on the mat placed on the cot on which the patients slept. The rooms and beds were immediately cleared and fumigated, the mats exchanged for new ones, the patients who required it, were washed, their clothes renewed, and a free ventilation was obtained; after which, those who were able to walk, were compelled to move about in the verandahs, and were not suffered to lie down to sleep, (to which from natural indolence they are always inclined, but particularly when under the influence of this disease) and those who required assistance were attended by orderlies, of whom a sufficient number were obtained. Their legs and feet were bathed in warm water, rubbed with the camphor liniment and oil of turpentine, or with linim. mercuriale, and rolled in flannel. Slighter cases required only dry friction, this was repeated every two hours, at the same time that a pill was given, composed of two grains of calomel and the same quantity of squills; and where its use was indicated, the diuretic mixture with nitre and distilled vinegar was employed. Blisters were frequently resorted to, either to the scrob. cordis or back, and sometimes mustard sinapisms were applied to the soles of the feet or to the calves of the legs; and on the recurrence of a violent paroxysm of vomiting or dyspnoea, large doses of laudanum in ardent spirits were

given, and repeated when judged necessary : æther and cordial medicines were also given, and the patients were encouraged to drink freely of the solution of crystals of tartar, to which a portion of arrack was added. Those who were inclined to eat were not put under any restrictions as to diet, as the food of the natives consists principally of condiments ; besides which, the prejudice of cast renders it a difficult matter to interfere in this particular.

This practice was occasionally varied by administering gamboge in small doses, alone, or combined with the purgative powder, which was generally given every third or fourth evening. But the sick being so numerous, I found it absolutely necessary to simplify the practice as much as possible, being compelled not only to prepare every medicine, but also to superintend the regular administration of the remedies ordered, well aware that otherwise they would be neglected. The extent of duty which I had to perform prevented me from keeping any journal, further than of the admissions, discharges and deaths ; nor was I, at this time, able to examine a single case after death.

With the view of checking the ravages made by the disease, and in order to attack it in its earliest stage, the men were paraded twice a day, before mounting guard or proceeding on fatigue, (the whole being employed in the erection of the fort) and when returned from work in the evening ; and then immediately inspected and interrogated. When any

man exhibited the slightest symptom of the disease, he was immediately ordered into hospital; at these periods too a dram of arrack (being about two ounces) mixed with double the quantity of water, was given to each man, which he was compelled to drink on the spot; and however much at first it might militate against their cast, they soon became reconciled to it, from the dread which the devastating effects of the disease had produced on their minds. They were also ordered to avoid the night air, by sleeping in their huts or tents, but this it was almost impossible to enforce, the superstitions of the natives being so strong; they even entertained the idea that a devil was let loose upon them, and would not allow them to avoid the disease.

The propriety of the modes of prevention and cure adopted, very soon appeared; on the fifth day after my arrival not one death occurred, and on the seventh, not one new case was admitted; in the interval, however, the scene was melancholy in the extreme. The deaths one day amounted to eight, and it occurred, more than once, that some of those who attended the funeral of their comrades one evening, were themselves followed to the grave the next. Dissolution took place in many instances, I may indeed say generally, in a sudden manner; very frequently while speaking to one man, I have been called to another, whom I had just before left under promising circumstances, and have found him gasping, his eyes protruded, his hands clenched, and a few minutes have closed the scene: and it has some-

times happened that the man I was addressing has been taken off in the same manner.

During the whole of this period I had no assistants excepting the native orderlies, whom I could not depend upon to carry my instructions into effect; and my whole time almost, day and night, was consequently passed in the duties of the hospital and of the surgery. I was therefore willing to attribute to fatigue the unpleasant symptoms I now began to observe in myself, such as unusual inclination for sleep, heaviness of breathing, and weight of my limbs; but on the thirteenth morning after my arrival I awoke with a sensation of tightness, as if a bar were placed across my breast, and impeded the action of my lungs. Upon getting from my palanquin (in which I slept with my clothes on), I found my legs and feet perfectly numbed, swollen and œdematous; my lips were numbed, and felt unusually enlarged; and the space round my mouth, reaching nearly to my eyes, felt numb. I immediately took a large dose of laudanum and brandy, and subsequently a purging powder of calomel, jalap and crystals of tartar. Finding, however, the symptoms grow worse, my face and throat being swollen, I was compelled to collect my palanquin bearers and leave the place, giving my servants directions for my treatment on the road. During the journey (a distance of nearly one hundred miles) they frequently found it necessary to take me from the palanquin, apprehensive that I should have been carried off in one of the urgent paroxysms of dyspnœa. Under the

usual mode of treatment I recovered in about three weeks, but was soon after again attacked when visiting the hospital, whither I had gone, as I conceived, perfectly well. The numbness in the feet and about the mouth was now attended with vomiting, urgent dyspnœa, suppression of urine, great anxiety, heavy sighing, and a tendency to syncope. Having a little recovered by a large dose of tinct. opii, æther and brandy, I again took the purging powder; but the urgency of the symptoms alarming my friends, I was carried to the nearest garrison, where there was an European surgeon, a distance of about thirty miles, where, with care and extreme attention in removing me from the palanquin whenever the paroxysm returned, I arrived in safety, contrary to the expectation of my friends. Here, under the skilful and unremitted attention of the surgeon of the 4th Ceylon regiment, (which I shall ever hold in grateful recollection) I again recovered; but my constitution was so much impaired by this disease, and by previous attacks of hepatitis, that it was judged necessary to order me to England.

The treatment of my case was similar to that I had generally adopted, only that gamboge was given more frequently. Considerable apprehensions were entertained lest effusion in the pericardium, or cavity of the thorax, might take place; and it was even feared that the brain would be affected, as my memory, after the first attack, became considerably impaired, and which even now has not been completely restored.

As illustrative of the disease, I have to mention another circumstance in my own case, which still occurs at intervals, although not to so great an extent as at first, namely, an extraordinary fluttering of the heart, almost producing faintness : while I laboured under the disease, it occurred more violently and more frequently, whether when reading, when walking, or perfectly still, (so entirely was it independent of external excitement). I cannot describe the sensation in any other way, than that it appeared as if my heart were suspended by a single thread, which being divided, it fell down ; I could almost hear it, and very sensibly felt it. My lips were observed to become pale, my eyes closed, and a state approaching syncope supervened. A violent palpitation succeeded, which, on subsiding, left extreme lassitude and faintness. When this symptom first occurred, a violent beating of the carotid arteries came on, generally at about five in the evening, which could be perceived plainly at the distance of several yards. When this pulsation ceased, I was left so extremely weak and languid, as to excite in the minds of my friends considerable apprehensions for my safety.

It very seldom happens that Europeans are attacked with this disease at Colombo ; and among the natives it does not appear to be so fatal there as at Trincomalé ; nor do I recollect any other instance of an officer being afflicted with it, excepting after the Candian war in 1804, when many Europeans, both officers and privates, fell victims to it.

Captain Percival, who has written a history of Ceylon, speaking of this disease, observes, that it is occasioned "by the low diet and bad water which the natives are accustomed to use; and in part, perhaps, by the dampness of the climate in the wet season." He also observes that "it swells the body and legs to an enormous size, and generally carries off the patient in twenty-four hours." He describes the cure of the native practitioner to be "rubbing the patient all over with cow-dung, oil, chunam (lime) lime juice, and preparations from herbs, and then to bury him to the chin in hot sand." He adds, "when the legs only are affected, it is called elephant legs, from their bulk. They are also called Cochin legs, being very prevalent in Cochin on the Malabar coast, where the disease is attributed to the unwholesome brackish water." At Cochin, however, I was informed the disease was much more prevalent at Quilon and Tellicherry than there.

The Cochin leg, or Elephantiasis,\* is very common among the natives of India, but it does not appear to impede, in any great degree, the motion of the limbs; as many coolies and palanquin bearers, who are affected in this way, can run nearly as fast,

\* I made several attempts to procure a case of this disease, in its very early stage, but the prejudices of the natives in favour of their own practice is so strong, I could not succeed.

and with as little inconvenience, as those who are free from it.

Bad water, bad diet and damp have been, I believe, generally considered as favourable to the production of berri berri at Trincomale and Palitoo-pané (where it proved so fatal): the diet certainly was very bad, and in the latter place the water appeared as if mixed with milk. With considerable trouble, however, good water was procured by digging only a few feet below the surface of the earth; if we dug deeper, the water became brackish. Over these wells it was found necessary to place sentries, both to protect them from abuse by the people themselves, and from the wild elephants, who were attracted thither from the neighbouring jungle, where they were in immense numbers.

The most severe cases at Trincomalé occurred during the change from wet to dry weather, when a strong and hot land wind prevailed; and the melancholy effects of the disease at Palitoo-pané took place during dry weather; indeed a heavy shower of rain happening to fall at the moment of my arrival there, (after a long dry season) was hailed by the natives, with their usual superstition, as a happy omen, as they attributed the disease, in part, to the extreme dryness of the atmosphere; but, as they do not generally admit of natural causes, they principally considered it to originate in the wrath of their deity, occasioned by the building of a temple having been stopped by order of the commandant, who detected



some natives in the act of appropriating part of the materials, intended for the construction of the fort, to the purpose of the temple; others considered it to be inflicted on them at the instigation of the King of Candy, whose people were interrupted in their depredations on the salt, which this new garrison was established purposely to protect.

Bontius, in his "Diseases of India," mentions the "berri berri," or "barbier," and describes the treatment to be similar to that related by Captain Percival; and the late Dr. W. Hunter (I believe of the Bengal army\*); has treated of the subject very fully in his "Diseases of Lascars and Seamen in India."

### CASE I.

Gunner J. M'Guire, of the Royal Artillery, at Trincomalé, about thirty-five years of age, a stout healthy man, was admitted into hospital on the morning of the 30th of October, 1808; his legs and feet, and his hands to his wrist, were much swoln and œdematous, benumbed and heavy, feeling (to make use of his own words) "as if they did not belong to him;" throat swoln and face bloated; respiration difficult, with great oppression at the præcordia; tongue foul; pulse eighty-four; skin moist. He complained of an internal sensation of great heat,

\* Of the Bombay Marine. The chief value of Mr. Hunter's work consists in Dr. Christie's Account of Berri Berri. *Edit.*

particularly in expiration, when he observed "that his breath burned his throat;" his head was slightly confused; great thirst; bowels regular; urine scanty, high coloured and extremely hot; his legs and hands were immediately bathed in warm water, then rubbed with the camphorated liniment and spirit of turpentine, and afterwards rolled in flannel bandages; he then took a purging powder, composed of six grains of calomel, half a drachm of jalap, and three grains of gamboge, and was desired to drink freely of the solution of crystals of tartar, to which a portion of ardent spirits was added; after the purgative had operated freely, he took two grains of calomel and as many of powdered squills every two hours, and every third hour half an ounce of a diuretic mixture composed of half an ounce of nitre dissolved in two ounces of distilled vinegar; the liniment was repeatedly rubbed into the legs and feet, and dry frictions were applied to the sternum, as a blister was inadmissible, from urgent symptoms of strangury having succeeded the use of that remedy on former occasions. Next morning, (31st,) he was much relieved, the œdema was reduced, but the numbness continued; the medicines were ordered to be repeated, and arrack was mixed with the solution of crystals of tartar. On the 1st Nov. his urine was considerably increased, but still hot and high coloured; a great reduction of the swelling was observable; his respiration was still difficult, but his breath had lost that intense heat before complained of; he now felt a distressing sensation in the epigastrium, which was relieved by taking sixty drops of laudanum and one ounce of brandy, and by being mo-

derately exercised ; at noon and at night these symptoms returned, but were again relieved by the same treatment. On the 2d of November a sensible amendment had taken place, and he had passed more urine since the preceding evening than at any time during the disease. On the 3d, the œdema had left him, excepting only the right foot, which was slightly swollen ; his urine was nearly natural ; the calomel was omitted, as his mouth had become affected ; he was now ordered a pint of Madeira wine in addition to the other remedies. During the night the distressing symptoms returned, but by the use of frictions and gentle exercise, they soon subsided. On the morning of the 4th, they had entirely disappeared ; he was however ordered the usual purging powder ; the diuretic mixture was omitted, as his urine was passed in sufficient quantity. He continued gradually recovering, and the medicines and wine were left off, with the exception of the purging powder, which was repeated every fourth morning until the 24th of November, when he was discharged.

A few days afterwards he was admitted with bilious remittent fever, then very prevalent in the garrison, of which he was discharged cured, and again admitted in May ; but on neither occasion did any symptom of berri berri appear.

## CASE II.

Bombadier William Sheva of the Royal Artillery at Trincomalé, was admitted into hospital on the

evening of the 19th February, 1809. His legs and feet, being very considerably swoln and œdematous, numb and stiff, his pulse quick and hard, skin and urine natural; his legs and feet were bathed, rubbed with the liniment, and rolled in flannel: he was ordered the solution of crystals of tartar with arrack, and he took the usual purging powder; but as this did not operate sufficiently, ten grains of calomel were given towards evening. On the 20th the swelling was somewhat reduced, but the numbness continued; his urine had become scanty, hot, and high coloured, and his respiration difficult when stooping, lying down, or on any exertion, which immediately induced great fatigue. In addition to the fomentations and frictions, he was ordered to take, every two hours, twenty drops of the tinctur. ferr. muriat. On the 21st the swelling and œdema were very considerably reduced; respiration only difficult when stooping, or suddenly changing position; urine increased in quantity, and without that heat before felt. He describes the effects of the tincture, (to use his own words) as creating "an immediate glow of heat through the whole body." Thirty drops ordered every two hours, and the other remedies to be continued. On the 22d, 23d, and 24th, he continued recovering; the tincture was given only every four hours. On the 25th he was entirely free from all symptoms of the disease; the tincture was now taken only twice a day, the bitter infusion was added, and he took the purging powder. He was discharged on the 28th, but returned on the 20th March, with slight symptoms of the disease of which he was

discharged cured on the 28th. From this period he continued in good health, and performed his duties regularly; yet, although a very temperate man, his face was always observed to be bloated.

On the 7th May he was again taken into hospital, with alarming symptoms, which he acknowledged had been for three days gradually increasing; his legs and feet were now swollen to an almost incredible size, extremely numb, stiff, cedematous, heavy and quite cold; he felt a general sense of fulness, with great oppression and tightness at the præcordia, urgent dyspnoea, great anxiety and restlessness; pulse quick and full, bowels regular, urine hot and scanty. The usual purging powder was immediately given, and after being bathed, his legs and feet were rubbed with mercurial ointment, camphor and turpentine. At night, after the operation of the purging powder, the dyspnoea continuing urgent, a large dose of laudanum and brandy was given, and the frictions were ordered to be continued every two hours. On the 8th he was something better, but not having passed any urine, he was ordered the diuretic mixture, two grains of calomel, and the same quantity of squills every two hours. On the 9th he was much relieved, and had passed nearly a pint of urine: the mercurial frictions were now used only twice a day, but dry frictions were frequently employed, and arrack was added to the acid drink. On the 11th his respiration became quite easy, his urine copious, and the swelling had nearly subsided; the medicines and remedies were gradually omitted, inter-

posing only the purging powder every third or fourth day, until the 20th, when he was discharged.

On the 28th July he was once more admitted, but the symptoms were very slight, and soon yielded to the usual remedies, and he was discharged on the 12th August following.

### CASE III,

Gunner Andrew Tallent, of the Royal Artillery, at Trincomalé, was admitted into hospital on the 10th of March, 1808, with symptoms of berri berri; his legs and feet were much swoln and œdematous, with rigidity and heaviness of the lower extremities; respiration difficult, with great oppression at the præcordia; tongue clean; bowels regular, and pulse natural.

Upon inquiry it appeared that he had perceived the approach of these symptoms for nearly two weeks, but that being, on command, at a fort about three miles distant, he deferred applying for relief until regularly relieved from that station. After the operation of a powder consisting of six grains of calomel, twenty-five of jalap, and ten of crystals of tartar, he was ordered to take a pill, which contained one grain of calomel and two of squills, every eight hours, and the pot. tartari for his common drink; he passed the night well, and next morning (11th March) there was less swelling of the legs and feet; they were then directed to be rubbed night and

morning with mercurial ointment and camphor, and to be rolled in flannel; on the 12th and 13th he continued to recover; his legs and feet gradually regained their natural size; their stiffness and heaviness were nearly removed, and his respiration had become natural. The calomel was now left out of the pills, the mouth having become affected. On the 14th he was allowed a gill of brandy in lieu of the regular allowance of arrack granted to soldiers in Ceylon, which was taken from him on his admission into hospital. On the 17th his medicines were omitted, and he was discharged on the 19th, with injunctions to report himself, without delay, on the recurrence of any symptoms of the disease.

These injunctions however he disregarded, and he had been several days sick before he reported himself on the 21st of April; when re-admitted, his legs and feet were much swoln and oedematous, stiff, numb, and heavy; his respiration was very difficult; his skin hot and dry; pulse labouring; urine scanty, hot and high coloured; the same mode of treatment was pursued as at first; the powder procured several stools, and a large flow of urine; two grains of calomel and as many of squills were now ordered every six hours, and the usual acid drink: on the 23d, some reduction of swelling was observable, and respiration was easier; on the 25th the swelling of the legs had very much subsided; the numbness and the heaviness were removed; the urine was in sufficient quantity, and the respiration free: on the 26th he was free from every symptom of the disease, and on

the 29th he was again discharged with the usual injunctions.

This man was a third time admitted, on the 24th of May; his legs, on this occasion, were only slightly swollen, but his respiration was extremely difficult; his urine very hot, high coloured and scanty, and his bowels confined. He had oppression at the præcordia, and a general sense of numbness and heaviness over the whole body; his pulse was quick and small; his skin moist and cool. He began, as before, with the powder of calomel &c. had a blister applied to the scrobiculus cordis, and was ordered to drink freely of the solution of crystals of tartar. On the 25th his bowels were open, but his urine was still very scanty; his legs were more swollen; respiration more difficult; the general sense of numbness increased, and his stomach was so irritable that nothing could be retained. He was ordered to the warm bath, and his legs rubbed every two hours with strong mercurial ointment and camphor, and he had a saline draught frequently. In the evening, with less irritability of stomach, he complained of violent pain in the bowels; he was anxious, restless, and uneasy; had great thirst, and was at times slightly delirious. Some Geneva was added to the solution of crystals of tartar; a terebinthinate clyster was directed and frictions of camphorated oil to the belly after fomentations, with a blister to the back of the neck. On the 26th the restlessness, anxiety, dyspnoea and irritability of the stomach were increased; the latter was attended with pain in the region of the stomach,



for which a blister was applied. At noon he had a copious stool, and passed about two ounces of deep coloured urine. At six in the evening faintness and cold perspiration were observable; he had lost the power of swallowing, and about twelve at night he expired. A very extraordinary circumstance occurred in this case after death: pulsation was distinctly felt both in the temporal and carotid arteries for the space of two or three minutes; it then ceased, but returned after an interval of seven or eight minutes; these intermissions were observed for nearly half an hour, when pulsation entirely ceased.

#### APPEARANCE ON DISSECTION.

The lungs were found to adhere to the pleura; a thick bloody fluid was effused into their cells; the heart was greatly enlarged, and an unusual quantity of fluid appeared in the pericardium: no fluid was effused in the general cavity of the thorax, but in that of the abdomen the effusion was considerable: the diaphragm was very highly inflamed: the liver was unusually large, but otherwise healthy: the intestines throughout their whole course were inflamed: spleen and kidneys enlarged: the stomach contained a quantity of black thick matter, which tinged its internal coat: the urinary bladder was collapsed, and its internal coat was inflamed. Water was, to a slight extent, effused throughout the cellular substance of the whole body. The head was not examined.

This man had been under treatment for this dis-

ease so far back as 1805, on his return from the Candian country; and I found on inquiry after his death, that it frequently happened that his legs became swoln, and his breathing difficult; but that being relieved by dry frictions with the hand or hot flannels, he neglected to apply for assistance.

#### CASE IV.

Bombadier J. Neading, being in hospital at Trincomalé for slight febrile symptoms, from which he was convalescent, was attacked with berri berri (to slight affections of which he had been subject) on the 26th June 1808, when he complained of violent pain at the pit of the stomach, difficulty of breathing, a sense of general fullness and swelling of the body and limbs, with rigidity and numbness of the lower extremities; bowels costive; urine scanty, hot and high coloured. After the operation of the purgative powder of calomel &c. the dyspnœa continuing, with a distressing sense of fulness and tightness in the epigastrium, a large blister was applied; his legs and feet were directed to be bathed in warm water, rubbed with camphor liniment and spirit of turpentine every two hours, and afterwards rolled in flannel. The calomel and squill pills were also given every second hour, and the usual acid drink freely. On the 27th the purging powder was repeated, after the operation of which, the dyspnœa was relieved. On the 28th he was in every respect better. On the 29th the remedies were employed only every eight hours: however, as the disease was at this time very

prevalent in the garrison, and as this man had been often attacked by it, it was judged advisable to remove him to a more healthy station, where he continued until the 8th March, when he was brought back labouring under very severe symptoms. In this interval he had been twice slightly affected, and each time recovered in a very few days. He arrived very much exhausted from fatigue, occasioned by the voyage, having been two days in a small cutter. His legs, feet, arms and hands were now swoln, œdematous, numb and rigid; his hands entirely useless and deprived of sensation; he felt a most distressing sensation of weight and tightness at the præcordia; occasional tremors; dyspnoea at times extremely urgent, at all times troublesome; urine very scanty, excessively hot and high coloured, and he had not had any stool for three days. The purgative powder of calomel, &c. was immediately given, and occasionally cordial medicines with æther, and he took some sago with a portion of wine: as the powder did not operate, a purgative enema was exhibited towards night, and this failing of effect, he took, in the morning of the 9th, a dose of the infusion of senna with jalap; which was repeated until stools were procured. After this had sufficiently operated, he was directed to take twenty drops of the tincture of muriate of iron every two hours, and he was allowed a pint of Madeira wine in addition to a portion of arrack in the acid drink. At night severe dyspnoea, with irritability of the stomach, came on, when he was ordered fifty drops of laudanum in an ounce of brandy: on the morning of the 10th, these symptoms

were removed, and his hands were less numb, yet his legs and feet remained as before. On the 11th and 12th he continued improving, but the tincture being expended, a mercurial liniment was rubbed into the pit of the stomach; frictions and blisters were used, and calomel and squills and other diuretics given with occasionally purgatives. He had a severe paroxysm of dyspnœa on the 16th, attended with weight and icy coldness of the epigastrium, and cold, numb, swollen, and considerably œdematous extremities, which was relieved by stimulants and frictions. A similar paroxysm recurred every two or three days; during a paroxysm on the 29th the sense of numbness extended to his eyelids and nose. A supply of the tincture of muriate of iron having been obtained on the 30th, of which twenty drops were given every three hours, the other medicines were omitted. Until the 5th of April he felt better; his urine increased, and the coldness was relieved. On the 8th the purging powder was given, and the dose of the tincture augmented to thirty drops. On the 10th his respiration continued free, and he was much improved generally; a slight sense of coldness still, however, remaining in the stomach, especially after the admission of food, he was ordered three grains of Cayenne pepper three times a day, and the tincture was omitted, and wine with sago was given. On the 13th the coldness was not so unpleasant; he was able to assist himself, and he felt on the whole much better, but languid, with occasional tremors. As his bowels were inclined to be costive, the purging powder was given this morning. On the 17th, the cold-

ness continuing, ten drops of the tincture of cantharides were given after each dose of the pepper. On the 20th the distressing coldness returned in the stomach, with vomiting, succeeded by great debility and low delirium; the vomiting was relieved by the saline mixture in a state of effervescence, and then warm wine was given him, and the tincture increased to eighteen drops each dose. On the 24th he was very delirious, his breathing became laboured, deglutition difficult, his extremities more numb, his face much bloated, his abdomen distended, and the restlessness was greatly augmented. Frictions and the laudanum and brandy were employed with advantage, and in the evening he took the purging powder, but this not operating, a terebinthinate glyster was exhibited. On the 25th these symptoms were more urgent; a small quantity of urine was drawn off by the catheter, which appeared to afford some relief: the warm bath was employed, and he took 100 drops of laudanum in arrack, and a large blister was applied to the scrob. cordis. Towards night all these symptoms were aggravated; a considerable quantity of urine was again drawn off; but his stools became involuntary, the delirium increased, and a considerable degree of strabismus was observed in both eyes: deglutition became impossible, and at about five o'clock in the morning of the 26th he expired, strongly convulsed.

#### EXAMINATION AFTER DEATH.

The lungs adhered to the pleura; the heart was small and loaded with fat; the diaphragm wasted

and inflamed ; the colon was distended with flatus ; the stomach natural ; the small intestines were generally inflamed ; the spleen was natural ; the pancreas smaller than usual ; the liver large and hard ; the kidneys were large but not inflamed, and, like all the other viscera, overloaded with fat. There was no effusion in either the abdomen or thorax, but circumstances prevented the examination of the head.

**AN ACCOUNT**  
**OF THE**  
**ENDEMIC FEVER OF SPAIN,**  
**AS IT OCCURRED AT CARTHAGENA IN THE**  
**AUTUMN OF 1812.**

**BY THOMAS PROUDFOOT,**  
**THEN ASSISTANT SURGEON OF THE 27<sup>TH</sup> REGIMENT.**

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**CARTHAGENA** is situated on the sea shore, having a high hill on each side ; these hills diverge for a certain way, then incline towards each other, forming an irregular circle, which nearly surrounds a low, damp, marshy plain about twenty miles in diameter ; and so few are the points of vision that the greatest extent of the valley seems not more than one third of the real distance. The effluvia arising from the stagnant water, and the putrefaction of vegetable matter, considerably taint the surrounding atmosphere, and the stench of the marsh can be distinctly perceived at a very considerable distance. This accounts for the prevalence of intermittent and remittent fevers at Carthagená, and unquestionably contributes towards producing the disease in question. . The

injurious effects of the effluvia are also evident in the squalid sickly appearance of the natives all over the marsh. During the summer months the fever, most prevalent at Carthagena, is of an inflammatory kind, accompanied with a violent determination of blood to the head, which in fact is the essence of the disease. This was apparent from a case-book kept by the late Dr. Wright, which fell into my hands, wherein he described the symptoms pretty accurately, as headach, giddiness, dimness of sight, redness of the face and eyes, accompanied with a hot dry skin, and a strong, full, hard, and frequent pulse; &c. ; but towards the end of August or beginning of September the type of the fever generally begins to alter, which is known by its being accompanied with a greater degree of languor and lassitude, violent thirst, depression of spirits, anxiety, a sense of weight and uneasiness in the epigastric region, and a slight vomiting of bilious matter. Still, however, the fever retains, in a certain degree, the symptoms of synocha, and will in some instances yield only to the vigorous antiphlogistic treatment so necessary in that disease.

While the troops from Carthagena served with General Maitland's army in the province of Valencia, no disease of a serious nature prevailed among them; the 67th regiment had several cases of intermittent fever, but the whole of the men in hospital at Alicant (except three) were able to embark with their corps, which was ordered to return to Carthagena on the 25th of August, being about the



period at which the fever generally begins to alter its character. As soon as the troops debarked at Carthage, the number of sick increased daily. On the 9th of September Dr. Wright opened a new hospital, and on the 14th he began to take cases. From these it appears that the inflammatory fever was still the most prevalent; some symptoms of bilious gastric fever were observed, such as anxiety, thirst, restlessness, bilious vomiting, yellow furred tongue, yellow suffusion of the skin and eyes, &c. : but though the symptoms were described differently, the method of treatment remained unaltered. The death of Major General Ross, which happened on or about the 26th of September, 1812, was perhaps what first excited general alarm ;\* and accordingly the Spanish

\* General Ross died at Galleras, a fort situated on the summit of a hill of considerable height on the west side of the town, the surface of which is hard and dry, it is to all appearance a very healthy place, but in reality one of the most insalubrious spots in Europe. Its summit attracted clouds during the night, and in the morning was enveloped in mist for several hours after sun-rise, which left an appearance on the ground as if there had been a heavy fall of rain: the hot sun succeeding, extricated noxious vapours from the earth during the remaining part of the day; and towards evening there was generally a breeze from the land, which crossed the marsh, and conveyed the miasmata to Galleras. As soon as the sickness at Carthage was known at Cadiz, an order was sent to withdraw the troops from the barracks in the town, for the purpose of avoiding the supposed highly contagious nature of the disease: the hard dry soil of Galleras probably induced the General to encamp them under the fort, where they were exposed, not only more directly to cold during the night, but also to the influence of the effluvia from the marsh, as well as those extricated from the ground on which the

physicians were consulted, and visited the British hospitals in company with Dr. Wright, in order to ascertain if the disease was of a more malignant nature than that which usually prevails at Carthagera every autumn. These physicians were decidedly of opinion that several men in the hospital had what they called the *epidemia* or yellow fever. After making frequent inquiry, and obtaining information from various sources, I am inclined to think that General Ross died of the yellow fever, and that it was one of the most severe cases, because when Dr. Wright was first taken ill, he said, "he had got the General's fever, from which there could be little hope of ever recovering," and died a few days afterwards. I arrived at Carthagera on the 4th of October, and on the 5th received on board a ship fitted for the accommodation of the sick, about seventy of the worst cases, and continued to receive all the bad cases as they occurred in the garrison, till the 21st of December, when the epidemic ceased. Three died the evening they came on board, two the day following, and in the course of a few days more, upwards of twenty of the original number. The morbid appearances upon dissection were nearly the same in all. It was about this period that Dr. Wright was taken ill, and acted as his own physician; the first day, he took mild aperients, but finding the prostration of

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tents were placed. This is one instance of the fatal tendency of the erroneous doctrine of contagion in yellow fever. I am convinced had the troops remained in town, one half of the sickness would not have taken place.

strength increase to an alarming degree, he exchanged the aperients for bark and wine. I was requested to see him the evening before he died; the black vomit, mixed with the injeſta, to which it bore a strong reſemblance, and ſubſultus tendinum, were then the predominant ſymptoms.

Both old and young were liable to the diſeaſe; but thoſe who lived freely and irregularly, and who had been in the habit of drinking ſpirituous liquors, were moſt liable to the attack.

The wives of the ſoldiers, who lead very irregular lives, ſuffered in equal proportion with their huſbands. Though whole families were ſick at the ſame time, their diſeaſes were different, ſo that hepatitis, diarrhœa, dysentery, intermittent and remittent fevers, were ſometimes ſeen in the ſame families; but the deaths happened chiefly among thoſe who had the gaſtric fever, or who were carried off afterwards by an obſtinate diarrhœa.

Yellow fever has been variously deſcribed by different authors, as they conſidered the diſeaſe contagious or non-contagious, continued, or remittent. The term itſelf, as has been often remarked, is very objectionable, and apt to lead the inattentive into ſerious error; perhaps it would have been better had that diſeaſe been placed in the order phlegmaſiæ, and deſcribed as an inflammation ſui generis \* excited chiefly by

\* It may be proper to mention here, that this account of the epidemic at Carthage in 1812, was written in 1813, and for-

cold, applied to the surface of the body, the parts having previously acquired a certain susceptibility to disease, from the state of the mind over the constitution, and from exposure to marsh miasmata under an high atmospheric temperature.

The disease in general seemed to commence without any distinct rigor. Great and sudden prostration of strength, or loss of muscular energy, accompanied with unquenchable thirst, a furred tongue, particularly towards the base and centre; a sense of weight and uneasiness in the epigastric region, which was painful upon pressure, and a frequent vomiting of dark bilious matter, were the principal pathognomonic symptoms of the disease at Carthage last autumn, when it so much alarmed the adjacent country. As the disease advanced the symptoms became more violent, the sense of weight and uneasiness at the præcordia was gradually changed into pain, which, as already stated, was greatly augmented by pressure; the vomiting became more frequent, and the matter rejected was also changed from yellow to a dark brown colour resembling the grounds of coffee, and

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warded by Deputy Inspector Brown to Dr. Borland, then Inspector of Hospitals in the Mediterranean. Being on service, I had not an opportunity of consulting any author who had written concerning this fever; and I was inclined to consider it as distinct from the remittent fever. But subsequent experience on the eastern coast of Spain, where the causes did not operate with so much force as at Carthage, convinced me that these diseases were nearly allied, and that the endemic might be at first continued, then remittent and alternately intermittent in the same patient.

constituting the black vomit so much dreaded in the West Indies and America.

The skin and eyes began to assume a deep yellow colour ; petechiæ, or numerous dark livid or purple spots, of various sizes, appeared all over the body ; sometimes phlyctenæ or watery vesicles appeared on various parts, being most numerous on the breast, shoulders, and arms. The violent thirst, prostration of strength, universal anxiety, uneasiness at stomach and vomiting, continued to increase ; the patient sometimes complained of pain across his forehead and in his eyeballs, which in some instances seemed distended, prominent, and previous to the yellowness taking place, of a glassy shining appearance ; the tongue, lips, and teeth, if not frequently cleaned, became covered with black foetid sordes ; at length the patient became delirious, lay constantly on his back,—gradually working down to the foot of the bed, and picking at the bed clothes ; the body now assumed a deep yellow colour, the features shrank, and these symptoms were generally followed by hic-cough, subsultus tendinum and death.\* Abscesses in the groin and axilla sometimes appeared during convalescence.

The temperature of the body was often little above the natural standard ; at other times a very peculiar dry, hot, acrid sensation was communicated to the

\* Death generally took place between the fourth and the ninth day, though in some cases as early as the third. The suppression of diarrhœa, however, will frequently carry off the patient three or four weeks after the commencement of the attack.

touch. Though the pulse was generally weak and quick, as in ordinary gastritis, it was occasionally found soft and even full. The bowels were very irregular, and the frequency of alvine evacuations seemed to depend in some instances upon the seat of the inflammation; if the inflammation was confined chiefly to the stomach, the bowels were torpid; if the whole alimentary canal participated in the disease, a severe diarrhoea was a very frequent occurrence, and in such cases the vomiting seemed less urgent.

The appearances upon dissection were uniform, and satisfactory in as far as they agreed with what might have been expected from the symptoms: being chiefly an inflamed state of the stomach and intestines. Upon opening the abdomen and reflecting the omentum, in many cases, nothing of a morbid appearance presented itself; in others, fasciculi of red vessels could be seen running on different parts of the intestines; and when the disease commenced with great violence, and speedily proved fatal, the whole of the peritoneum was much inflamed.

Upon making an incision into the stomach, commencing at the pylorus, the villous coat appeared crowded with innumerable minute red vessels, forming specks on different parts, of a beautiful scarlet colour; but the appearances varied according to the violence of the inflammation, which in general was greatest at the cardiac orifice. In many cases the latter part, at first, appeared quite black and mor-

tified ; but upon investigation this appearance was proved to depend upon an effusion of blood between the nervous and villous coats of the stomach. I have seen the villous coat entirely destroyed in different places, leaving little excavations, and a plexus of innumerable enlarged and denuded blood-vessels, several of these being ruptured. Many little streaks of coagulated blood were seen mixed with the contents of the stomach, which consisted of a dark brown coloured fluid resembling the grounds of coffee, frequently blended with coagulated blood, as if there had been a rupture of an over distended blood-vessel on the internal gastric surface. The whole of the alimentary canal was frequently lined with this dark brown coloured fluid. Patients, after seeming convalescence, were frequently carried off by an ungovernable diarrhoea, accompanied by a thickening and ulceration of the large intestines, apparently originating from the same causes which produced the disease in the stomach. Though the liver generally participated in the disease, it was not necessarily engaged in it, nor could a degree of inflammation which was chiefly confined to its small lobe, ever be considered the cause of death. The liver was frequently of a preternaturally soft texture ; the spleen was often twice its original magnitude, and covered with black spots exhibiting nearly the same appearances as dark livid petechiæ do, on the surface of the body.\*

\* The foregoing description of the morbid appearances is the result of twenty-three dissections.

From the history already given, the appearances upon dissection, the disease generally commencing at a certain period of the year, and being confined to particular situations, I am convinced it was not contagious, but that it was chiefly owing to an atmosphere impregnated with marsh miasmata, extricated by an unusual degree of atmospheric heat, the exciting cause being cold.

The important subject of contagion in yellow fever, has been agitated with the keenest controversy, and the point stands as yet undecided, and hence, when it occurs, people often labour under all the evils of a strict quarantine, apparently as unnecessary as if the prevalent disease were pneumonia or hepatitis.

From the appearances upon dissection, and the importance of the organ chiefly concerned, it is obvious that general and topical blood-letting were naturally suggested as the first necessary step. I have taken 120 ounces at four different bleedings, in thirty-six hours, and with the happiest effects; after each bleeding the pulse becoming fuller and softer, the vomiting, thirst, anxiety, and depression of spirits gradually giving way, and patients almost invariably affirming, that they felt lighter and easier after that operation: but the bleeding seemed only to be used with advantage during the first days of the disease, or perhaps as long as the texture of the stomach had not been destroyed.

After bleeding, the warm bath, putting on clean



dry flannels, and laying the patient in a comfortable bed, a calomel purge, assisted by a large enema, the frequent exhibition of a small quantity of some mild diluent drink, frequent sponging of the body with warm water and vinegar to cool the skin, which is often hot and dry at the commencement of the disease, and the application of a large blister to the epigastric region, ought never to be omitted. If the symptoms were urgent, and not mitigated by the foregoing measures, and if as large a quantity of blood had already been drawn off, as from the state of the system seemed admissible; friction with the Ungt. Hydrarg. and small but frequently repeated doses of the submuriate of mercury were exhibited, so as gently to move the bowels and bring on salivation. Here, however, the greatest prudence and discernment are necessary: if the symptoms run high, something extraordinary must be done or the patient will inevitably perish; but if time can be gained by bleeding, blistering, the warm bath, &c. the gradual introduction of mercury into the system, so as to obtain its fullest possible specific action, is what ought to be attempted, and will be more likely to ensure success than an alterative course. Bleeding, general and topical, blistering, the warm bath, fomentations to the stomach and abdomen, friction with mercurial ointment, and small but frequently repeated doses of the submuriate of mercury, can all be used in urgent cases nearly at the same time and with the best effects. Should the warm bath be found inconvenient, and the skin remain hot and dry, sponging the body with warm water and vi-

negar, and the internal exhibition of the aq. ammon. acetat. will be found beneficial. If the bowels are torpid, the doses of calomel can be increased, and *vice versa*.

It has been already remarked that blood-letting seemed only to be used with advantage at the commencement of the disease, or perhaps as long as the texture of the stomach continued unchanged, and before the mercurial action was established.

This inflammation would be very governable by art, were it not seated in an organ, the sound state of which is intimately connected with the regular continuance of all the various operations in the animal machine. The effects of blood-letting which lessens increased vascular action, and mercury which produces universal irritability, quick pulse, &c. appear irreconcilable; whether or not an inquiry into the changes which take place in the inflamed part, would shew an analogy between their operations, or how they both become useful, I shall not determine; but however mercury may act, (as preceded by venesection) it seemed to possess very salutary effects in this disease; for no sooner was a salivation produced than the symptoms gradually gave way, the thirst was diminished, the tongue, before covered with yellow scales, began to get moist and clean, a pustular or vesicular eruption appeared round the mouth, the anxiety, weight, and uneasiness at stomach began to yield, and however strange it may appear, in two instances, the leading pathognomonic symptom of black

vomit disappeared, and recovery took place under the influence of mercury.

When the influence of that medicine had been thus established, little more seemed necessary than to promote gentle perspiration by the aq. ammon. acetat. to produce two or three stools daily by some mild aperient, and to guard against the exciting causes of the disease,

Speaking thus of mercury, I wish it to be understood, that I have seen patients die under a copious salivation ; but generally these had been two or three days ill previous to taking any active medicine, or undergoing decided treatment ; the texture of the stomach perhaps had been destroyed previous to the adoption of proper measures, or before the mercurial action had taken place ; but even under such circumstances it seemed to arrest the progress of the disease. Emetics have been generally condemned in yellow fever ; and in no stage of the disease, as I have witnessed it, could they have been exhibited without producing very bad consequences ; strong drastic purgatives, ardent spirits, wine, camphor, opium, cinchona seemed all injurious ; as might have been expected from the appearances upon dissection.

The cold affusion was tried after venesection, and before the use of mercury, but apparently without advantage. During convalescence much benefit seemed to be derived from an infusion of quassia with sul-

phate of zinc or sulphuric acid, taking care, however, not to push these remedies too far, so as to produce uneasiness at stomach. The powder of colombo was also found useful. To obviate relapses, which were frequent, half a drachm of mercurial ointment was generally ordered to be rubbed in every second night, till good health appeared permanently established.

ON A DISEASE  
OF THE  
LYMPHATIC GLANDS  
OF THE  
GROIN,

ATTENDED WITH PECULIAR SYMPTOMS.

BY A. COLLES, M. D.

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**I**N this communication, I shall submit to the Profession an account of a disease of the inguinal lymphatic glands, which from its progress, as well as its situation, is liable to be mistaken for a venereal or scrofulous affection, but which is attended with symptoms so peculiar as to entitle it, in my mind, to be considered as a distinct disease.

One of the lymphatic glands of the lower or femoral range is generally the seat of this disease. Sometimes, however, it is seated in one of those of the upper or inguinal row. I have never had an oppor-

tunity of seeing the disease in its incipient state, the patients not having applied to me until the swelling had attained the size of a walnut. At this period the integuments are not in the slightest degree discoloured, nor is the surface shining. The inconvenience, of which the patient complains, is a slight pain which he experiences in walking or in making any considerable exertion with the lower limbs.

The progress of the tumor to suppuration is uniform though slow; the integuments become red, but not pointed; and the matter is spontaneously discharged at a period varying from the fifth to the eighth week. The cavity of the abscess is small in proportion to the extent and hardness of the tumor. The matter is in general of a tolerably good consistence: not unfrequently a second and sometimes even a third collection of matter forms in the neighbourhood of the first, the tumors exhibiting the same indolent character. The openings by which the matter escapes are narrow, and spread not to a large size, preserving rather the appearance of fistulous orifices than degenerating into broad ulcers. In general they heal spontaneously in the course of two or three months from the period of ulceration: but I have met with some few cases in which they became complete fistulous ulcers, and remained open for the space of even twelve months, the patients having refused to submit to the surgical treatment which fistulous ulcers require. A very striking feature of this disease is the trifling degree of pain which attends it. The patients suffer so very little as to be capable of walking

about without any perceptible lameness. I have known some of them, in the situation of merchant's clerks, continue to lead a very active life under this complaint, doing the out business of the house, as they term it, during the entire progress of the disease. In fact the patients generally complain more of the bulk than of the pain of the swelling. One case only occurred to me, where the pain was such as to require the abscess to be opened with the point of a lancet ; and in this instance, for three or four days after the opening had been made, the patient experienced the most unaccountable soreness and pain from this very trifling operation. In some few cases, while the tumor is approaching to suppuration in one groin, the glands of the other begin to swell ; and in a rare instance, now and then, the tumor having arrived at suppuration, remains for a time stationary, the matter is then gradually absorbed, and the swelling at length slowly removed.

This disease usually occurs in men between the ages of twenty and forty, but in general nearer to the former than to the latter period of life. I have met with only one instance of it in a female, who was about thirty years of age.

From the very earliest period at which I have had an opportunity of observing this complaint, the constitution is found to be engaged. The patient is affected with headach, which is more severe in the morning, and which is increased by stooping : he also admits, when questioned, that he feels more fa-

tigue than usual from long continued or violent exertions : his pulse is quick, being in no case, when he is out of bed, under 100, and generally beating 120 in the minute. This quickness of pulse appears the more extraordinary, as it is obviously not produced by a high degree of pain, nor is it accompanied by a discoverable derangement of any other of the functions ; on the contrary, the countenance is natural, respiration easy, skin of temperate heat, and not very dry, tongue clean, appetite as good as usual, and scarcely ever nocturnal sweats : the patient, however, feels himself more comfortable in the open air than when confined to the house.

I have had an opportunity of examining one patient only, while lying in bed in the morning. His pulse was then only seventy-two, but on his rising and dressing himself it rose to one hundred and ten. The tumour at this time was as large as half a hen's egg, and the integuments were not discoloured.

The patients generally conceived that their health was improved by this disease ; for before the final healing of the ulcerated opening they have informed me, that they felt themselves then in better health than they had enjoyed for some months previous to the attack.

In the treatment I have confined myself to those means which I have conceived to be calculated to mitigate the severity of the symptoms, and to pre-



note suppuration, which, indeed, seemed to be generally an unavoidable, and always a salutary termination of the disease. The headach appeared to be alleviated by no class of medicines but by purgatives. These were repeated every day, or every other day, until this symptom was completely removed. Very large doses were often required to produce the desired effect. The removal of the headach was not attended with a diminished frequency of the pulse. Poultices, warm fomentations, and gum plaisters were the only topical applications to which I had recourse. Leeches had been applied, in two instances, before I saw the patients, but apparently without any salutary effect. Cold, and, as they are termed, repellent applications, when used for a few days in the earlier stages of the disease, did not appear to produce either benefit or injury.

A knowledge of this disease may possibly assist us at some future day in developing the pathology of the lymphatic system, which remains still involved in considerable obscurity, and will at all events be of some use, I trust, in practice.

I cannot say, from observation, what consequences would result from the exhibition of mercury in this complaint. But I apprehend that we have every thing to fear from administering that medicine to patients affected with such an extraordinary quickness of pulse. Indeed the very apprehension of the evils that might thence result, has deterred me from ever putting the matter to the test of an experiment.

We should be careful to distinguish cases of this disease from examples, no doubt very rare, of truly venereal enlargement of those glands, wherein the swelling of the gland precedes, for some days, the appearance of the chancre. By attending to the constitutional symptoms, so characteristic of the disease here described, we shall with certainty avoid this error.

I may here observe, that in some instances, when an enlargement of the inguinal gland arises from drying up a venereal chancre without the use of mercury, the patient will, as in this complaint, be affected with severe headach and quickness of pulse. Such cases, however, will scarcely be confounded with the disease here described; for the previous ulceration of the genitals in the one case, and the absence of that symptom in the other, are differences sufficiently characteristic. And though the quickness of the pulse and the severity of the headach be common to both, yet these constitute almost the only constitutional symptoms in the one case, while in the other they form but a part of a series of alarming derangements of the system, such as remarkable prostration of strength, loss of appetite, and profuse night sweats. In short, the one case presents us with a striking picture of general disease and debility; while the other exhibits every character of general health, except the affection of the head and the extraordinary quickness of the pulse.

**AN ACCOUNT**  
**OF AN**  
**UNCOMMON DISEASE**  
**OF THE**  
**HAND AND FINGERS.**

**BY C. H. TODD,**

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**IN** the month of April, 1814, a woman, aged sixty years, who subsisted by the use of her needle, consulted me for an affection of her right hand, from which she experienced much anxiety and pain. The cuticle was completely detached from the entire of the middle, ring, and little fingers, from all the ulnar edge, and from a small portion of the back of the hand, and was elevated into extensive vesications, containing thin and highly offensive sanies.

I gave exit to the matter by making a few punctures with a lancet ; and conceiving the disease to bear a resemblance to the cutaneous paronychia, I cut off as much of the morbid cuticle as could be re-

moved with facility. The surface thus exposed was foul and gangrenous, with several small ill-conditioned ulcers occupying the intervals between the sloughs. The ulcers appeared to penetrate the skin merely, and few of them were larger than the head of a small pin. The pain was very great, and considerably increased by the hand being held in a depending position. This woman complained that she had not slept for three nights; her pulse was frequent, her tongue dry and incrustated; she had much thirst, and her countenance was pallid, and exhibited the characters of great general indisposition. She informed me that she had gone to bed five nights before perfectly well, but awoke in the morning with sick stomach, headach, and languor; however, she arose and attempted to work, but found a peculiar numbness in her fingers which prevented her holding a needle. In the course of that day she felt a sensation in the fingers and edge of the hand, as if stung by nettles, and towards evening a few red spots, resembling flea-bites were observed; during the night these uneasy sensations increased, and on the following morning the spots were quite black, and all the affected parts extremely painful; she applied a bread poultice, and on the day after, the vesications were formed, which became progressively larger, until she applied to me,

I dressed the surface with the unguentum resinæ flavæ, and directed for her an aperient medicine to be taken immediately, and an opiate at night. On the day after, I visited her at her lodgings; she had

slept a little during the night, but was not refreshed; her fever was unabated, her pulse very weak, and she appeared slightly incoherent; she had less pain in the hand and fingers than on the preceding day, but the aspect of the diseased surface was not improved. The carrot poultice was applied, and she was ordered to take a small quantity of wine and beef tea in the course of the evening and night.

On the following morning she was much worse, in every respect; a severe diarrhoea took place during the night, and her discharges were now involuntary. The disease of the hand had extended, but she seemed in a great degree insensible to pain, and raved incessantly; a mixture with aromatic confection and tincture of opium, and an additional allowance of wine were prescribed; however, she died early on the ensuing day. I examined the diseased hand, and found that the sloughs, although extensive on the surface, did not penetrate deeper than the cutis; the tendons, their sheaths, and even the subcutaneous cellular membrane were perfectly sound.

A very delicate man had been, for a great part of his life, a waiter at a tavern, and during that period was extremely irregular and intemperate. After he had passed the fortieth year of his age, he became severely indisposed, and was obliged to relinquish his situation. Thus a sudden change took place in his habits and mode of life; he was unable to provide himself with any of those luxuries which were

the perquisites of his former occupation ; his diet was of the poorest description, and his health rapidly declined ; he was subject to severe cough, and frequent attacks of pain in the right side, for which he was entered as an out patient on the books of the Richmond Surgical Hospital.

Early in September 1814, this man was ordered to take small doses of calomel for an affection of his liver. On the 14th of that month he attended at the hospital, complaining that he had been prevented from sleeping during the two preceding nights, by pungent pains in the extremities of the fore and middle fingers of his right hand, and that he was alarmed, in the morning, by the appearance of three or four small bluish specks on each of them.

In reply to my queries he stated, that he had felt himself for some days extremely weak ; had loathed his food ; had great thirst, and a depression of spirits, for which he was induced to have recourse to his usual cordials. He thought these symptoms might have been the effect of the mercurial pills, which he accordingly discontinued, (he had taken only ten grains of calomel ; ) his tongue was dry and rough, and his pulse frequent and weak. As his bowels were confined, I ordered him a dose of castor oil, to be taken immediately, and a draught, containing thirty drops of tincture of opium, at night, provided the restlessness continued. His hand was wrapped up in flannel moistened with camphorated spirit, and he was

desired to take broths and wine in moderate quantities.

Although I desired this patient to attend at the hospital daily, he did not return until the 18th, on which day he was brought in a carriage, and was so weak and ill that he was unable to walk without assistance. The cuticle had separated from the fingers, and the nails had loosened: on removing the cuticle, appearances were observed exactly resembling those described in the former case. The poor man's countenance was much altered for the worse; his tongue was dark coloured, dry and chopped, and he articulated with great difficulty; his pulse was extremely feeble, and he was obliged to be carried into the ward to which he was admitted. In the course of a few hours some dysenteric symptoms occurred, which were relieved by a draught of castor oil and a cordial opiate at night; beef tea and six ounces of wine were ordered for him, which he took with some relish, and the fingers were dressed twice during the day with an ointment composed of ung. resin. flav. ʒvi. ol. terebinth. ʒii.

On the following day he appeared much relieved. The same plan of treatment was persevered in.

Sept. 21. Much improved in health; tongue clean and moist; thirst diminished; he took food with an appetite, but the diseased surface was not materially altered. Ordered half a pound of mutton and

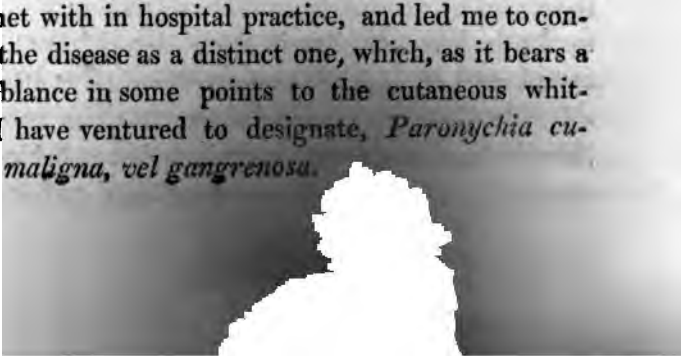
a pint of porter daily. The fingers to be dressed with the ung. gum. elemi cum terebinth.

28th. Able to get up and walk into the garden. The sloughs have been all thrown off, and the fingers present florid and healthy granulations.

The stimulating dressings to be discontinued, and the zinc lotion substituted.

Oct. 16. Discharged cured. During this man's indisposition the biliary system was frequently out of order ; indeed there was an evident enlargement of the liver, but by the occasional exhibition of the blue pill and saline purgatives urgent symptoms were prevented, and he was dismissed the hospital in better health than he had enjoyed for several months before.

These cases, having occurred within so short a space of time, and having been marked by symptoms of so much urgency, could not fail to attract my notice. They brought to my recollection other instances of the same affection, which I had occasionally met with in hospital practice, and led me to consider the disease as a distinct one, which, as it bears a resemblance in some points to the cutaneous whitlow, I have ventured to designate, *Paronychia cutanea maligna, vel gangrenosa*.





Whitlow is so generally believed to be an affection purely local, that it is not improbable that the nature of this form of the disease has been frequently overlooked, and its connection with a morbid state of the digestive organs, or of the system at large, unattended to. As far as I have observed, this species of whitlow occurs only in persons who have passed the meridian of life, and in such as are weak and unhealthy. It is preceded by symptoms strongly indicative of great debility and of a want of energy in the functions of assimilation. Patients complain for several days of loss of appetite, of flatulence, thirst, and irregularity of the bowels, depression of spirits and watchfulness. Then the local affection takes place, and is most commonly felt at night for the first time, the patient's restlessness being increased by stinging pains in the fingers or hand; at this period small red or livid spots, without hardness or elevation, may be observed, which soon become black; the sensation in the part is between soreness and itching, and the patient is induced to rub or scratch it: this accelerates vesication, the cuticle becomes detached, and a thin and offensive sanies is effused under it. When the vesicles are removed, the subjacent skin appears sphacelated, and superficial ulcers are discovered, the disease shewing a disposition to extend by destroying the surface merely. At first, local pain is severe, but in a few days it is not much complained of, and the absence of pain is to be considered rather as a cause of alarm than the contrary. Several parts of the fingers and hands are liable to be attacked by this disease in succession; and it often

happens that when one part is nearly well, another will become affected. This must be expected in any case in which general indisposition continues.

During the entire progress of this disease, the patient labours under a low fever; sometimes this fever does not require confinement to bed, but in many cases it is serious, and is liable to assume a typhoid character. In every instance the functions of the stomach and bowels are imperfectly performed, and all the secretions are diminished: lassitude, mental depression and anxiety are among the symptoms most distressing to the patient, and to the persons around him.

The treatment necessary for a disease such as the paronychia gangrenosa appears to be, is so obvious, as to render a minute detail of it at present quite superfluous. However I may observe, that in this affection our practice must be chiefly directed to counteract constitutional disease and weakness, and to improve the condition of the organs of digestion. Unless these objects are attained, our patient will, in all probability, sink; not under the effects of local irritation, but in consequence of that highly morbid state of the system, of which the topical affection is solely an indication. Before the disease appeared to me in this light, I met with two or three fatal cases of it, in which the affection of the fingers was not of an extent sufficient to account for the unfortunate termination of the complaint. Indeed I never saw an instance in which the severity of consti-

tutional indisposition could be explained by the local symptoms.

With regard to topical remedies, I have remarked that, except in extremely painful cases, emollient or relaxing applications are either injurious or useless. In the first instance, spirituous fomentations, or a camphorated embrocation, are sometimes productive of relief. When vesicles form, all the diseased cuticle ought to be cut off with the scissors as early as possible, and warm terebinthinate dressings applied; these should be continued until the surfaces are cleansed, and become florid, and then a mild ointment may complete the cure. In tedious cases the process of skinning will be promoted by the use of the zinc lotion, and in such instances I have seen the black mercurial wash extremely beneficial.

These opinions with respect to the nature and appropriate treatment of this peculiar affection, had been conceived and acted upon by me for several years; however it afforded me much satisfaction to witness a confirmation of them in the following case.

Early in March last, I was called on to visit a gentleman, who has been a resident in this city for upwards of forty years. He shewed me two livid spots upon the fore finger of his right hand; they were very small and not elevated; one of them was so minute as to resemble the mark of a thorn; it was situated near the nail; and the other, which was

larger, was near the middle joint. He complained of severe pain in the finger, which extended along the inside of his arm, and there was a slight appearance of swelling and inflammation in the finger; he was certain that he had received no injury.

I directed the hand and arm to be frequently fomented, and a bread poultice to be applied to the finger.

My patient informed me that for several days he had felt himself much indisposed, with headach and lassitude; the appearance of food disgusted him; he was thirsty, and had an unpleasant taste; his tongue was dry, and of a dark brown colour towards the back part; his countenance was remarkably sallow, and his eyes had a jaundiced hue; his pulse, which was naturally very slow, was a good deal accelerated, but very feeble, and he laboured under great dejection and anxiety.

For several nights his sleep was uneasy, and on the night preceding my visit the pungent pains in the finger completely deprived him of rest. After he arose he observed the dark coloured spots, which induced him to apply for my advice.

This gentleman was upwards of seventy years of age, his countenance always pallid, and his person thin and slight; but he was remarkably healthy and active. He had lived very much in society until lately, when finding himself now and then a little

Indisposed, he was induced to become more domestic, and to regulate his habits.

Some opening medicine had been administered, and had operated before I paid my visit; I therefore directed six grains of the pil. hydrar. with one grain of opium to be taken at night, and a bitter aperient draught to be taken in the morning.

On the next day my patient was not relieved, although he had slept for two hours during the night, and had been briskly purged by the draught. The livid spots on the fingers had enlarged very much, and were productive of much alarm to him and his family. A repetition of the medicines was ordered, and he was requested to take light nourishment, and about half a pint of Port or Madeira wine in the course of the evening.

In two days the affection of the finger was greatly increased; vesication had taken place at both points, and the vesicles had united. I then removed all the diseased cuticle, and dressed the sloughy surface as recommended above. For some days the disease continued to extend, but at last by persevering in constitutional treatment, by carefully paring off the detached cuticle, at every dressing, and by the use of stimulating applications, its progress was checked, and the parts healed.

When the affection of the finger was almost removed, the disease appeared on the edge of the hand,

near the extremity of the ulna, exactly in the same way as on the finger, and followed precisely the same course.

By the use of the mercurial pill and aperient draughts, the appetite and digestive powers of my patient were much improved: these medicines were therefore continued for about a fortnight after the local complaint had been removed, and he has ever since enjoyed his usual good health.

ACCOUNT  
OF A  
DISEASED APPEARANCE  
IN THE  
INTESTINES OF CHILDREN.

BY JOHN CRAMPTON, M. D.

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&c. &c.

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THE fevers which have prevailed in Dublin and throughout Ireland for some years, have been so fully noticed by others that I shall forbear to enter into the subject. Dr. E. Percival has given an accurate history of the epidemic for the years 1813, 1814 and 1815, in the Transactions of the Medical Association; and Dr. Cheyne in the Dublin Hospital Reports for the years 1816 and 1817; from these, and from the reports of the Physicians of the House of Recovery in Cork-street, almost all the prevailing opinions of the day may be easily collected, as well with respect to the symptoms and nature of the epidemic, as to its progress and method of treatment.

The object of this paper is to detail a peculiar diseased appearance which was observed in the intestines of some children, whose cases terminated fatally, in one of the fever hospitals of the House of Industry. These appearances may, perhaps, throw some light on the causes of those fevers, at least among children, and afford some aid in arranging a suitable treatment, and in making a proper selection of remedies.

The continental writers have been more attentive to the condition of the inner membranes of the stomach and intestines than the physicians of these countries ; it is easy to see this from the terms which they employ to denominate the different varieties of fever : but the subject has not altogether escaped notice in the hospitals of Dublin.

That the epidemic has throughout shewn a strong tendency to attack the digestive organs, chiefly in their mucous coats, is fully admitted by most persons who see those fevers on a large scale : it has been sufficiently insisted on by Dr. Cheyne, in his report, and an attention to this point tends to improve the practice in fever, where the epigastric distress is present. It shews that we should not confine our views merely to the sensorium, as some have done, but that we should extend them to other organs. Of the distress in these latter, the symptoms will often afford sufficient evidence ; but the examination of those who die of such fevers will frequently put the matter beyond a doubt ; indeed the



changed appearances vary so much in those who die from fever, that it is natural to conclude that no particular mode of treatment can be equally suited to fevers, as they occur attended by topical affections in different organs. The lancet and smart purgatives, so useful in certain forms of incipient fever, are by no means equally suited to such as are attended with gastric and intestinal distress, except in those instances where the serous membrane of the abdomen becomes inflamed, an occurrence which may take place at any period, and then it will be necessary to have recourse to general, as well as local sanguineous depletion.

The following cases present diseased appearances so much alike that they have been grouped together: they occurred in fever patients admitted in the months of February, March and April, 1818. They were examined after death by Mr. Phipps, one of the clinical clerks to the hospitals of the House of Industry, by whom preparations have been made of the morbid parts in the different stages of the disease. These are preserved in the anatomical museum of the Whitworth Hospital, House of Industry.

#### CASE I.

*George Johnstone, æt. 6, examined Feb. 5. 1818.*

#### THORAX.

Three ounces of serous fluid in the pericardium; lungs solid, and in a state of sanguine congestion.

## ABDOMEN.

Liver of a deep blackish red colour, loaded with dark blood; gall bladder empty and pale; stomach contracted; villous coat slightly tinged with red, and thrown into longitudinal and regular plaits; still more of this injected and plaited appearance in the duodenum.

The mucous membrane of the large intestines was much diseased; it was highly vascular, and covered with granulations of a yellow colour, as if a coating of yellow wax adhered to the villous coat. An attempt was made to remove this colour by washing, but it failed. Minute inspection with a glass shewed the villi converted into rounded tubercles, distinct, of a firm texture and yellow colour, confluent in a few patches, but generally distinct.

The coats of the intestines, when cut, were observed to be hard and thickened; the submucous and cellular tissue were not engaged, and externally the intestines did not appear diseased.

The most diseased portion was the rectum, but the tubercles extended through the colon, the caput coli, and even to the valve of the ileum.

The contents of the stomach and small intestines were a yellowish mucus, of the great intestines a thin ichorous matter, scarcely keeping their surfaces moist.

This boy was admitted on the 20th of January, labouring under fever combined with severe pectoral symptoms; his abdomen very tumid and tender to the touch; weak watery eyes; a rash or efflorescence like measles; his pulse 128; respiration hurried; illness of four days duration: the case looked like measles, but the eruption disappeared the next day.

His disorder appeared to give way to the treatment adopted; he was convalescent on the 24th, and had his appetite and a clean tongue on the 26th. On the 27th a relapse of fever set in, with erysipelas of the face, and inflamed eyes; his disease, terminated in suppuration and mortification of the cheek, and he died on the 14th day from his admission.

## CASE II.

*Anne Neylan, æt. 8. Feb. 9, 1818.*

### DISSECTION.

*Head.*—Some serous effusion between the convolutions, with slight venous congestion.

*Thorax.*—Heart and lungs sound, except some adhesion at the posterior part of the lungs, and some of that thickening described in the former case.

*Abdomen.*—Liver and gall-bladder sound; sto-

#### ON DISEASED INTESTINES.

mach empty, its villous coat plaited, and near the pylorus studded with granules, probably the mucous glands; small intestines healthy, except a slight roughness of the villous coat; large intestines much diseased; sigmoid flexure of the colon, when cut open, presented a black, ragged and apparently gangrenous appearance: washing in water almost completely removed this, shewing that it depended on the presence of a foul, blackened, and, apparently, secreted matter. When thoroughly washed, the prominent folds of the mucous membrane seemed studded closely with small, dirty white granulations, similar to those described in Johnstone's case, but smaller, less distinct, and not of so bright a colour; a small portion of the mucous surface close to the anus, was unoccupied by them: they were most numerous above the rectum; they extended up to the transverse arch of the colon, where the mucous membrane was extremely vascular.

In the descending portion, as it passes the left kidney, small ulcers about the size of mustard seed were seen pretty close together, depressed in the centre, with vascular and prominent edges. They would lead one to suppose that pustules of the small-pox had existed in the intestines, and left these ulcerations; variolous pustules were at the time on the skin, in the ulcerative stage, just retreating.

The contents of the intestines were of a dirty light green in the duodenum and commencement of the jejunum, but of a dirty white or grey in the central

portion, where the mucous surface was very white. This matter was separated by a very narrow and abrupt line from a greenish yellow collection, which tinging the small intestines of the same colour, extended to the colon.

The tongue and fauces were thickly covered with pustular ulcers; the whole surface of a deep red and greenish colour; slight increase of vascularity in the trachea, without any ulceration.

This girl passed through fever in the hospital allotted for the children; and during her convalescence the natural small-pox appeared. Under this complaint, which she had in a very severe form, she died on the tenth day of the disorder.

### CASE III.

*James Blake, æt. 6, examined Feb. 20, 1818.*

*Head.*—Slight serous effusion between the convolutions and in the ventricles.

*Thorax.*—Pericardium contained a small portion of serous fluid; lungs sound.

*Abdomen.*—Liver, gall-bladder, and ducts sound. Stomach much contracted in the centre, dividing the cavity into two pouches; the villous plaits corres-

ponding to this contracted portion were conspicuous and broad.

The small intestines were very vascular, and ulcerated towards their termination.

The mucous surface of the rectum presented the same rough, whitish, and granulated appearance as was noted in Neylan's case; traced upwards this gradually disappeared.

This dissection points out the different states of these tubercles as they advance in growth;—first the mucous membrane about the caput coli very vascular, this became, as it was traced onward, more thick and rough, the roughness assuming a distinctly conical form, became more elevated and exceedingly vascular. The tops of the tubercles next became hard and white, losing their vascularity; lastly, the whole was converted into the hard white cone, the confluent clusters of which produced the appearance first noted.

This child was admitted in fever on the 4th of February; from his emaciated appearance it was evident that he laboured under some disease independent of fever.

His feverish symptoms soon gave way to treatment in a cool airy ward; but he sunk tabid and emaciated on the 20th, in a fortnight after his admission.

## CASE IV.

*John Ferguson, æt. 5, examined March 7, 1817.*

*Head.*—Slight serous effusion under the arachnoid and in the ventricles.

*Thorax.*—Viscera sound.

*Abdomen.*—In the descending colon and rectum the mucous surface was thickly covered with greyish white granulations, which assumed, as they were traced to the anus, the appearance of a rough brown surface studded with yellow specks. The coats of the intestines were thick and hard; small ulcers about the size of a mustard seed were scattered throughout them,—their edges irregular, but well defined. The interstitial spaces covered with granulations.

Large, rough, irregular, and confluent ulcers occupied the termination of the Ileum.

## CASE V.

*Thomas Conolly, æt. 3, examined April 30, 1818.*

*Head.*—Slight serous effusion under the arachnoid.

*Thorax.*—Pericardium distended with clear serum; a small quantity in the right bag of the pleura; the whole of the right and a great portion of the left

lung was loaded with lymph and blood, solid, not collapsing, the diseased part cut off sunk in water. On these diseased portions lymphatics were seen distended with a red fluid.

*Abdomen.*—Liver pale and white, with an irregular surface. Gall-bladder pale and white. Termination of the ileum for about two inches from the valve much ulcerated and granulated. The mucous membrane of the large intestines slightly granulated, the rectum alone full of tubercles of a green hue; minute ulcers were dispersed throughout the colon and rectum. The hæmorrhoidal veins were in a varicose state.

This boy, by no means emaciated like the other children, was admitted with procidentia of the rectum to the extent of at least three inches, irritation and pain in that part, with considerable symptomatic fever, and anasarca of the face and legs. He was consigned to the care of the surgeons. The rectum was replaced; bowels freed with castor oil;—he survived, however, only a few days.

This would appear to have been an example of the tubercular disease of the intestines in its incipient state, before emaciation took place; it was attended with general inflammatory diathesis; to this succeeded effusion on the brain, into the pericardium and lungs, as well as into the cellular tissue, and on the mucous membrane of the intestines.



From the condition of the brain, the heart and lungs, it is plain that the child fell a sacrifice to symptoms which were masked, and which merged in the suffering he endured from the protrusion of the rectum; had not this been the case, a more energetic line of practice on my part might have led to a very different result.

It is by no means clear that the appearance above described should, in every instance, be considered as the cause of the form of fever, which happened to be present; it accompanied the epidemic of the season, it likewise attended the small pox, and it was observed in some instances independent of any febrile disorder. It is possible that in most instances it existed antecedent to fever in those who were exposed to contagion.

Some of the children who had this disorder of the bowels passed through the fever, and were actually convalescent; they soon however were observed to waste and lose their appetite; the tongue became loaded, a hectic and dysenteric state was established, blood was often passed by stool, and generally prolapsus of the rectum with considerable irritation attended; papular and other eruptions were frequently observed to accompany the disease, the belly became inflated, purgatives afforded no relief, and the patient died in the last stage of emaciation. The skin was dry and squalid, often so dirty and discoloured, that washing and warm bathing produced no cleansing effects. The temperature was not much augmented,

except when a high degree of fever was present; and on the subsidence of this, many of them took food ravenously, even shortly before death. Most of these children came from infected houses, their parents having been accommodated in the other Fever Hospitals of the House of Industry.

Many are of opinion that most of the diseases which affected the poor at this period, including the fever, were attributable, in a great measure, to the scarcity and bad quality of the food with which they were supplied for the preceding two years, (seasons of uncommon distress) to the effects of the depressing passions, the neglect of personal cleanliness, and their habitations rendered unwholesome by foul and confined air.

That the food of the poor was universally bad during the two preceding years, is generally admitted; the potatoes were wet, the wheaten flour musty, consequently the bread of a very inferior quality. Many families were obliged to discontinue the use of wheaten bread, as it disagreed with the bowels; even the oatmeal was indifferent; however, had this latter been more used, it would have afforded better and more nutritious meals than those composed of bad malty bread, and indifferent tea, which was the chief diet of the lower class of the poor in Dublin. There is no difficulty in understanding, that unwholesome diet must prove injurious to the tender mucous coats of intestines.

The same effects may be the result of a scarcity

of food ; when there is a want of a fresh and sufficient supply of aliment, the secretions and excretions become sharp and acrid, and they irritate those textures, which, in the healthy state, receive scarcely any impression from their respective secreted fluids.

Neglect of personal cleanliness, and want of proper clothing, interferes with the healthy action of the exhalant system on the surface of the body ; an additional determination to the exhalants of the mucous membrane of the bowels is the result ; they pour out an unusual quantity of serous fluid ; a part of this seems to be coagulated on the villous coat, and thus in a great measure may be produced the disease in question.\*

In addition to the deposite of coagulated matter on the villous coats, there appeared to be a want of the healthy mucous secretion ; in some portions of the intestines, which were examined, the orifices of the mucous glands were discerned in a diseased condition, converted into small ulcers ; in some of the cases the mucous membrane was found unusually dry

\* In the fatal cases reported, there appears to have been a press on the exhalant system of the membranes of the brain and in the ventricles ; but the serous effusion seems to have been symptomatic and secondary, and to have come on later in point of time than the bowel complaint. It was perhaps attributable partly to the causes already assigned, and partly to the fever concurring with the morbid action in the intestines. An increased determination to the brain was thus induced, which terminated in effusion.

and unprovided with the usual healthy lubricating secretion.

Foul air, close and ill ventilated rooms, are known to be favourable to the production of malignant and petechial fevers; under such circumstances the organs of respiration cannot perform their usual healthy functions, and blood unfit for secretion is circulated through the body. In most of the cases of this disease of the mucous membrane, petechial and papulous eruptions manifested themselves; they soon however disappeared under the cool treatment adopted in the ventilated wards of the Fever Hospitals.

The disease first shewed itself attended by fever, in many instances evidently from a contagious source, with unusual abdominal tenderness, a very loaded tongue, often coated with an olive brown covering, intense thirst occasionally with vomiting, but more frequently with diarrhœa, tenesmus, slimy and greenish stools mixed with blood: if the disease was not too far advanced, on the subsidence of the fever, the bowel symptoms gave way to an appropriate treatment. Where remedies proved ineffectual, a true dysenteric state became established, the tubercles on the mucous membrane were converted into ulcers, and the patient died in a hectic emaciated condition.

When the disease terminated favourably, a quantity of yellowish branny scales were passed in the stools, which floated on the surface of the fluid discharges; they were like minute portions of v

from honey-comb. This appearance in the stools of children affected with dysenteric fevers, had been long familiar to me, but I was at a loss to account for it until I saw the intestines of those children that were examined after this disease. In the year 1818, when catarrhal fever was very prevalent in Dublin, I frequently observed this appearance in the bowel discharges, and it continued to shew itself through a protracted period of disease, but the patients ultimately recovered.

A disease of the mucous membrane of the intestines similar to that which has been described, is mentioned by Orfila\* as having occurred from acetate of lead being taken inwardly. The same diseased appearance of the intestines, is described by Dr. Baillie, under the head of dysentery;† a description of it may likewise be found § in Morgagni, and in other works || on the subject of morbid anatomy.

Some might be disposed to consider this change in the structure of the mucous membrane to be a modification of scrophula. There were not, however, any decisive marks of scrophula observed, either externally, or in the lungs, or in the glands of the mesentery of any of the children who were examined; nor was there a tuberculated state of any

\* Orfila treatise on poisons, vol. 2. p. 476—translation.

† Baillie's Morbid Anat. p. 179.—Baillie's Engravings, fasc. iv. Plate 3. Fig. 1 and 2.

§ Morgagni Epist. xxxi. Art. 21.

|| Acta Med. Berolin. Dec. 1. Vol. ix. p. 69.

other texture, which is usually the seat of that disorder.

In most of these children the lungs were found in a state of sanguine congestion, and in some instances the liver : this arose from the nature of the epidemic, which at that season (January, February and March, when the weather was very cold and variable) was blended with catarrhal and inflammatory symptoms. For these it was frequently necessary to use the lancet, and this practice was, for the most part, attended with success ; but in many of those patients who were admitted in a feeble and emaciated condition, it was quite impossible to push the general blood-letting to an extent necessary to subdue the disease. Leeches and warm bathing were employed with good effects, assisted by mild purgatives. The compound powder of ipecacuanha, with blue pill, and the hydrarg. cum creta with rhubarb, were likewise found serviceable in restoring a healthy mucous secretion, and in preventing the ulcerative termination of the disease of the intestines.

This paper might have been considerably extended were I inclined to speculate on the sympathies excited in other systems, by the disease in the mucous system, just described, or enter into the minutiae of its pathology ; or had I been induced to exemplify the successful treatment of it. This perhaps I might have done ; but cases to illustrate this matter would have been liable to objection, as the disease is not easily ascertained until after death, and I am unwill-

ling to advance any thing but facts, or such reasoning as is evidently deducible from them. Future investigations may improve our diagnostics in affections of the abdominal viscera, not only as to the viscus, but even as to the texture involved in disease. I am satisfied to have pointed out this disorder, which I do not announce as a new discovery, for morbid appearances in the intestines, such as I have described, are noticed in the writings of others, as I have already related ; \* and I am anxious to direct the attention of the Profession to the mucous surface of the digestive organs in feverish diseases. The condition of the brain in fever deserves to be closely watched, but we should not direct our practical views altogether to the cerebral organs ; many patients may be saved by extending our views to other systems. Indeed this has been fully impressed on the medical attendants of the hospitals of the House of Industry, by the frequency of this form of fever, in which considerable gastric and intestinal distress prevailed, and it has been confirmed by the inspection of the bodies of those who have been examined after death.

\* Vide pag. 300.

**THE HISTORY OF**  
**A CASE**  
**OF**  
**GUNSHOT WOUND OF THE HEAD;**  
**IN WHICH A PORTION OF A BULLET, &c. LAY IN THE**  
**SUBSTANCE OF THE BRAIN FOR SEVERAL MONTHS,**  
**WITHOUT THE MENTAL OR PHYSICAL POWERS OF**  
**THE PATIENT BEING INJURED.**

**BY JOHN KIRBY, A. B.**

**MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, &c. &c.**

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**MR. Samuel Cottnam, Assistant Surgeon to his Majesty's — Regiment of Infantry, received a wound in the head from robbers, while he travelled as an outside passenger on one of the mail coaches. He was first seen by my friend Mr. Hemphill, surgeon to the Cashel Infirmary, to whose kindness I am indebted for the following account of the situation in which he was found, as far as Mr. H. could recollect the circumstances. " Mr. C. received his " wounds about four miles from this town, and did " not arrive here for some hours afterwards. I saw**



“ him about two o’clock in the morning, and found  
“ an opening in his forehead, where a bullet had  
“ entered and passed for more than an inch under  
“ the scalp. I could not feel the ball, as there was  
“ a great deal of tumefaction of the part ; I applied  
“ a soft poultice to the wound, and had him put to  
“ bed, not wishing to give him any farther trouble  
“ at that time, as he was irritable and impatient.  
“ The same morning, about nine o’clock, I saw him  
“ again, and found him in very great pain, not hav-  
“ ing had any sleep, his face was greatly flushed,  
“ his skin hot and dry, and his pulse frequent. I  
“ took from his arm twenty ounces of blood, and  
“ gave him a purgative mixture, which operated very  
“ well during the day ; in the evening he was rather  
“ better. Next morning the bullet was extracted ;  
“ it was flattened and ragged, which made me think  
“ that the cranium must have received a severe injury,  
“ and put me on the alert against unfavourable symp-  
“ toms ; he was purged again that same day, and  
“ having slept well during the night, he complained  
“ of but little pain in his head on the following  
“ morning. He continued for two days in this si-  
“ tuation, when he complained of a violent pain,  
“ which shot from the wounded part to the back of  
“ his head ; his pulse was quickened, his skin hot,  
“ his eyes impatient of light ; I thought him very  
“ alarmingly ill. His head was now shaved and the  
“ temporal artery opened, from which I took sixteen  
“ ounces of blood ; he was purged again, and ice  
“ applied to his head. In the evening he was not

“ better, and I bled him from the arm ; he got no  
“ sleep during the night, and continued under the  
“ same suffering for six days, during which time he  
“ was bled once every day, and on two of the days  
“ twice ; each bleeding consisted of between sixteen  
“ and twenty ounces of blood ; he was also purged  
“ daily, and the ice continued to his head ; the  
“ blood sometimes shewed buff.

“ I entreated of him several times, while he  
“ was so ill, to let me examine the condition of  
“ the cranium, but he obstinately refused ; he  
“ would not even permit me to pass a probe  
“ to satisfy myself of the depth of the wound.  
“ As soon as the tumefaction left his forehead,  
“ I discovered with my finger, through the scalp,  
“ a groove in the cranium, and as the symptoms  
“ did not yield to the before-mentioned evacua-  
“ tions, I proposed to trephine him, which he also  
“ refused to submit to, I thought I was war-  
“ ranted in proposing the operation, as injuries of  
“ the cranium by bullets require that operation more  
“ frequently than most others. In seven days  
“ from the second attack he got some relief from  
“ the pain in his head, and had a little sleep, hav-  
“ ing been bled the night before. He then gradu-  
“ ally got better, but complained of a pain in his  
“ internal ear, which intermitted. A blister was  
“ applied, which did him some service ; the pain left  
“ him, and he gradually mended in his strength  
“ and appetite until he left Cashel ; and I have been

"informed, he continued very well during his journey to Dublin. I omitted to tell you, that I perceived one day when he was in great pain, that his pulse was irregular, and during the whole time of his illness it was more than a hundred."

About six months after he had received the injury, he consulted me; he then complained of occasional pain in his forehead, which he attributed to the stoppage of a discharge of matter from a sinus which remained where the ball had entered.

Through this sinus, a probe easily entered the cavity of the cranium, and could be passed between the os frontis and the scalp, as far as the mark of the incision which had been made for the purpose of extracting the ball. His health appeared to be very good; he eat with his usual appetite; in society he was chearful; his memory was as retentive as ever, and none of his faculties were impaired.

In this state he continued for six weeks after I saw him, when he complained that he was unusually oppressed with headach, which he thought depended on a derangement of his bowels, in consequence of having used some rich sauce at dinner, on the day preceding. His stomach sometimes turned, and he threw off large quantities of green bile; his nights were restless. When his bowels were well freed, he felt quite relieved, and after three days confinement he was well enough to go abroad. He had no appe-

tite however, and he looked very ill ; he made no particular complaint. After three days he had a return of the headach and sickness of stomach ; his skin was cool ; belly costive, his pulse was slower than it had been since I first saw him, and intermitted at every tenth stroke. He complained of a constant and severe pain in the back of his neck ; his pupils were somewhat dilated, and light caused no uneasiness. He said that he raved a little on the second evening of his relapse.

During the following day his pain was incessant ; his stomach rejected every thing, and in the evening he died, after having signified to his attendants, that he was altogether free from pain, and that he felt inclined to sleep. I found him lying in the position in which he generally lay while asleep.

#### DISSECTION,

Directly opposite the sinus in the scalp, there was a perforation in the os frontis, sufficiently large to admit the point of the little finger, and a groove in the external surface of the bone leading towards the wound which had been made for the extraction of the ball.

The internal spine seemed as if it had been broken, pushed aside, and had again united ; for the bone was extremely rough, spiculated and prominent in this part.

The dura mater through which there was an opening, corresponding with that in the bone, was morbidly adherent to its margin. The pia mater was also pierced, and closely united to the dura mater, in the vicinity of the sinus, which led to an abscess in the left hemisphere of the cerebrum, containing something more than an ounce of pus, and a large ragged portion of a bullet.

There were several pieces of bone within the substance of the brain at different distances from its surface, and some had passed altogether through it, and lay below the hemisphere. The ventricles contained upwards of a pint of fluid. The remainder of the brain was remarkably firm, and free from all appearance of inflammation.

This case adds one to the stock of those already on record, in which the individual survived for a considerable length of time an extensive injury of the brain. \* Having visited Colchester for the purpose of seeing the wounded, who were conveyed thither after the battle of Waterloo, I had an opportunity of seeing a young man, within whose head a musket ball had lodged. The external wound had healed; he seemed to enjoy very good health, and made no other complaint than, that he was subject to a giddiness whenever he took violent exercise, or his mind dwelt intently on any particular subject.

\* *Remarques sur le playes du Cerveau par M. Quesnay—*  
Mem: de l'Academie Royale de Chirurg: Tom. 1. p. 310.—  
Quarto Edition.

**A CASE**  
**OF**  
**DISEASE OF THE GUMS,**  
**WHICH OCCURRED DURING PREGNANCY,**  
**BY J. PITCAIRN, M. D.**

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AND DEPUTY INSPECTOR OF MILITARY HOSPITALS.**

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**THE** following case, which was uniform in its progress, and completely relieved by the treatment adopted, when other remedies had failed, appeared to have been connected with the state of the uterus; if a less successful treatment is usually employed, this detail will be worthy the attention of those to whom cases of the kind are most likely to occur.

The wife of a clergyman, in the county of Westmeath, during the three last months of her first and second pregnancy, experienced some inconvenience from a soreness of the gums of the incisores of the

lower jaw, for which, in the first instance, leeches and astringent washes were applied, without much advantage.

In the sixth month of her third pregnancy, the portion of gum formerly affected had increased so much in size, as to present a little ear or flap-like appearance on the outside and inside of the gums, accompanied with such excruciating pain of the teeth, (which were loosened,) that I advised her to go to Dublin, to consult my friend, Doctor Blake, of that city.

Dr. Blake removed the exuberant gum with the scissors, and advised the parts to be touched with lunar caustic every morning. After a week's trial, however, this was found to be ineffectual in repressing the growth of gum; the scissors were again employed, and this treatment was persevered in for a month, when she returned to the country on account of her approaching accouchement. In ten days afterwards the gum had increased to such a degree, and the disease was attended with so much pain, that I removed both the external and internal appendages; this was effected without much inconvenience. The parts bled a good deal, as they always did for about half an hour after operation, when the hæmorrhage ceased of itself, and in a few days they were perfectly healed, and the teeth again fastened. No inconvenience was felt during nursing, but when advanced about three months in her next pregnancy, the gums became uneasy, and from the

fourth or fifth month I was obliged to repeat the operation every third or fourth week, till her confinement, when, as before, the teeth fastened, and all pain and extra growth of gum ceased.

Such were the sufferings of this lady with her fifth, sixth and seventh children, that she required the same mode of treatment, and rather oftener with the latter than the former, but she always experienced the same benefit.

I have lately heard from her, and shall close this case by transcribing her own words: "There now appears a want in the gum, owing, I should think, to its having been so often cut, and the centre one of the three teeth is a little loose; in other respects they are like the rest of my teeth."

In submitting this case to the public, I have been influenced only by a wish to record a useful fact; as I have not the merit of the first suggestion of a remedy, which is as simple as it was successful.



**TWO CASES**  
**OF**  
**RUPTURED BLADDER,**  
**FROM ACCIDENT.**

**BY J. W. CUSACK, M. D.**

**ONE OF THE SURGEONS TO DOCTOR STEEVENS'S HOSPITAL, AND  
SURGEON TO ST. PATRICK'S LUNATIC ASYLUM.**

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**M. G.** æt. 26, a servant, on the evening of the fifth of February, 1814, while in the gallery of the theatre, felt a desire to void his urine. In the attempt to leave the house for that purpose, he fell, and struck, with much violence, the hypogastric region, against the edge of one of the benches. He said he felt at the instant as if his heart had burst. After the fall, he was incapable of raising himself up, or of standing without support when raised, and was compelled to incline his body forward; the pain about the umbilicus being intolerable in the erect position.

After this accident he was conveyed home by his friends and placed in bed, where he passed a sleepless night in much torture; towards morning his stomach became uneasy, and rejected its contents.

On the 6th, about twelve o'clock, he was brought to Steevens's Hospital, when I saw him for the first time. He complained of much pain in the abdomen, which was tense, and of sickness of the stomach; his countenance was pale, and expressive of much inquietude. Pulse 90; tongue white and furred. He requested most earnestly to have his urine drawn off, as he was tormented with a constant desire to pass it.

I introduced a catheter without difficulty, but scarcely one ounce of urine was evacuated, the instrument still remaining full, and seeming to overflow.

It was now manifest that the bladder must have been ruptured. From his own statement it appeared that he had drunk very largely of whiskey punch on the preceding evening, previous to his entering the theatre. Twenty ounces of blood were taken from the arm, and the effervescing mixture directed.

In the course of the day his sufferings continued to increase; the pain, tension of the abdomen, and vomiting being augmented. He had tried to take the effervescing mixture, but even with the addition of opium, it was instantly rejected. He scarcely rested ten minutes at a time, from the unceasing desire to make water; a few drops flowed, after much exertion, when in the warm bath, in which he was twice placed, with some temporary remission of pain.

In the evening the catheter was again used, but with no better success than at first ; the bleeding repeated to the extent of sixteen ounces, and a purgative injection administered.

7th. The patient had passed a miserable night ; after the injection had been twice repeated, he had one foetid stool. Nothing now rested on his stomach ; opium, both in the solid and fluid state, was immediately rejected ; he complained of excessive thirst, which he endeavoured to assuage by copious draughts of cold water, which the stomach retained but for a moment.

On a second introduction of the catheter, no urine flowed at first ; but by some change in the direction of the instrument, caused by the finger in the rectum, about three pints were evacuated. This circumstance was unexpected, as the same means had been ineffectually used before. During the day, no particular change in his situation could be observed ; the catheter was introduced in the evening, and about a pint of urine flowed slowly, almost guttatum.

8th. No fæcal evacuation had taken place, though cathartic injections had been frequently administered. A gum-elastic catheter, secured in the urethra, had not increased the discharge of urine ; the abdomen was tense, and painful from distension ; a fluctuation in the cavity could also be distinguished.

To make some effort at affording even temporary relief, it was proposed to puncture the abdomen. Hazardous and almost hopeless as such an expedient must appear, I consented to try it ; the patient having expressed his determination to submit to any measures proposed for his relief. Having placed him on a table, I commenced the operation by making an incision about two inches in length, midway between the umbilicus and pubis, through the integuments and fascia : having exposed the linea alba, I cautiously made an opening through its substance, sufficient for the introduction of a curved director, after which I prolonged the incision to the extent of about an inch. The peritoneum protruding, and affording an evident sense of fluctuation, I made a small puncture with a lancet, which gave exit to a large quantity of urine of a natural colour and perfectly transparent ; at the same time urine flowed freely from a catheter introduced into the urethra. The patient expressed himself relieved, and was placed in bed ; the gum elastic catheter was secured in the urethra.

The operation did not afford him any permanent relief, though the urine flowed both from the catheter and the opening in the abdomen. No alvine evacuation had taken place ; cold water was the only drink he could take ; of this he used large quantities, which were immediately rejected.

10th. All the distressing symptoms appeared to have reached their highest pitch ; countenance much

sunk, pulse feeble, 126 in the minute. As the catheter gave him severe pain, it was withdrawn; the urine had ceased to pass by the instrument, but some flowed from the puncture in the abdomen.

11th. He complained this day of being distressed by frequent involuntary seminal emissions. The urine had ceased to flow by the wound or from the urethra; in other respects his situation was not altered from that of the preceding day.

12th. He seemed now gradually sinking, his sufferings undiminished, his voice feeble, countenance ghastly, pulse weak and irregular.

13. He was delirious during the night, and died at ten o'clock this morning.

#### DISSECTION.

On opening the abdomen, I found few marks of active inflammation visible in the epigastric region. Below the umbilicus, the peritoneum adhered closely to the intestines, more particularly in the vicinity of the puncture. Similar adhesions also existed between the folds of the intestines; the quantity of lymph thrown out being so abundant, as to give to the parts in the hypogastric region, the appearance of one uniform mass; no traces of urine were at first perceptible, but on separating the adhesions and raising up the small intestines, about a pint was sponged out from the cavity between the bladder and

rectum. The peritoneum which descends into the pelvis was completely coated with lymph: the bladder was found very much contracted and entirely empty; the rupture had taken place in its posterior part and on the right side; the lowest point of the opening being a finger's breadth above that fold of the peritoneum termed the posterior ligament of the bladder. Its extent in the contracted state was one inch, and its direction obliquely from above downwards.

The edges of the aperture were separated by the protrusion of the mucous coat, which appeared of a reddish colour, and elevated by the effusion of some serous fluid beneath. On opening the bladder anteriorly, the entire of the internal coat presented the same vascular appearance. The viscera of the thorax were found perfectly healthy, and appeared not to have sustained the slightest injury.

The following case corresponded so closely in its progress with the preceding, that I shall forbear to enter minutely into particulars.

E. S. an hostler, aged 30, was admitted into Steevens's Hospital on the evening of the 10th of August, 1818. He stated that, about half an hour before, having been sitting on the battlement of a bridge, he had fallen from a height of twenty feet. At his admission he chiefly complained of being bruised about his back and loins, and made particu-

lar mention of the sensation about the præcordia, so much dwelt on by the former patient. He at first made no complaint of any distress about his urinary organs; but a short time after being placed in bed, he made an ineffectual attempt to pass urine; the catheter, which was introduced without difficulty, drew off about two ounces. In reply to my questions relative to the probable state of his bladder at the time of the accident, he stated, that he was not sensible of the slightest inclination to make water, having evacuated it a very short time previous to the fall.

I was anxious to ascertain the part of the body which first came in contact with the ground. He asserted that he must have fallen on his feet; but to his opinion on this subject I am not inclined to attach much credit. It may, however, be necessary to mention that he fell into a garden, and not into the stream over which the bridge is built.

On the second day he complained of much pain in the abdomen, which was tense and swollen: he had, during the night, made several ineffectual efforts to pass water; a small quantity was, however, evacuated by the use of the instrument.

From this period the symptoms of peritoneal inflammation continued to increase with great rapidity, and on the eighth day he expired.

With much difficulty an opportunity was obtained of examining the body, which was consequently done

in a hurried manner. The peritoneum presented the usual appearances of active inflammation, being thickened, and in many places adherent to the intestines, which were also connected together by large quantities of lymph. The quantity of urine in the abdominal cavity was considerable; in that fluid many portions of coagulable lymph were observed floating. The bladder lay in a contracted state, and was found ruptured almost in the same spot as in the preceding dissection, and to the same extent: the only difference that could be observed was in the direction of the rupture,—in this being more transverse. The mucous coat protruded between the lips, and exhibited more vascularity than was natural.

The cases of ruptured bladder which I have here related, are not brought forward with the intention of speculating on any particular mode of treatment, which, however varied, must, I fear, prove unsuccessful. In accidents of this nature the surgeon has generally to lament the imperfection of his art, while he witnesses the progress of the unfortunate patient to the termination of his sufferings. Though the facts here stated add little to our stock of practical information, they may perhaps be considered as not totally uninteresting; the instances of injuries exactly similar, which are before the Profession, being comparatively very limited. I find that the attempt which was made in the first case, to afford some relief to the patient by puncturing the abdomen, is



not unprecedented. Bonetis, in the *Sepulchretum*, relates the particulars of the case of a man, who fell from a considerable height at a time when the bladder was in a distended state. The symptoms indicating the presence of urine in the cavity of the abdomen, he was induced to make a puncture above the pubis. Instead of urine, however, blood flowed from the wound. On opening the cavity after death, this circumstance was accounted for by the rupture of one of the large veins. The rupture of the bladder was found in that part which looks towards the rectum, and was of sufficient dimensions to admit the passage of a large sized hen's egg.

AN ACCOUNT  
OF A  
CASE  
OF  
ACUTE RHEUMATIC INFLAMMATION,  
TERMINATING IN PERITONITIS.

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THE attempts which of late have been made to ascertain the seat of many diseases, and their exact limits, are extremely creditable to modern pathology; but the subject is still to be considered in its infancy, and with respect to rheumatism, little has been done in it, or at least done in the right way, namely, by dissection.

Dr. Scudamore, the distinguished author of one of our best practical works, will, I am persuaded, forgive me for calling in question the accuracy of his opinion relative to the seat of rheumatic inflammation.

Rheumatism is considered by that writer as a "peculiar species of inflammation, affecting parts which have a fibrous texture, and most frequently the synovial membranes;" from which quotation it should seem that Dr. Scudamore has inadvertently classed the fibrous with the synovial membranes; which latter have nothing fibrous in their texture, but, like the serous, are composed of cellular substance. Into this error he was probably led from finding the synovial and serous membranes frequently in contact, forming, as it may have seemed, one substance. He conceives that "the fibrous textures of the body are the true seat of rheumatism, which generally occupies the tendinous structure;" and he is of opinion "that inflammation of the capsular ligament," meaning probably the synovial membrane, "is a deeper seated and more fixed affection than the proper rheumatic inflammation." But he has advanced nothing satisfactory from an actual examination of morbid parts, to confirm this opinion. When the serous membranes become affected in rheumatism, he conceives it is owing to a previous affection of the contiguous fibrous structure; in proof of which hypothesis, he alludes to a case in which the dura mater became the seat of disease, from the transference thither of rheumatic inflammation from the limbs: in this case he conceives the morbid action proceeded from the dura mater to the contiguous serous membrane, the arachnoid. But this explanation of the case is conjectural merely, at least it does not appear that any dissection was made to ascertain the condition of the parts. In like man-

ner, rheumatic affections of the pericardium are supposed by the author to originate in some part of the tendinous structure of the heart; an explanation not deducible from the dissection, which seems to have suggested it; for that dissection shewed an inflammation apparently confined to the lining membrane of the pericardium. "Recent layers of coagulable lymph were found lining the internal membrane, both where it is spread out on the fibrous layer of the pericardium, and on the heart itself." Finally, he appears to have overlooked an important consideration, as shewing the order of parts in which the rheumatic inflammation originates, namely, that the sheaths of the tendons and the bursæ mucosæ, which are the parts most commonly affected with this species of inflammation, are analogous in their structure and offices to the synovial membrane.

### CASE.

Bridget Daly, ætatis 28, was admitted into ward No. 13 of the Richmond General Penitentiary, on the 22d of May, 1818, labouring under acute rheumatism. She complained of excruciating pain in her knees, which, although not discoloured, were considerably tumified in consequence of effusion into their joints: the slightest motion was intolerable; she complained of thirst, and laboured under great anxiety and restlessness; her pulse was quick and full, and the heat of the surface was encreased; her tongue white and furred, and bowels constipated.

This attack commenced about three weeks after delivery, with rigors, heat and thirst. In a day or two after its commencement she was affected with general soreness, which was soon followed by the pain and swelling of the knees. Purgative medicines were exhibited, and she was let blood on the 23d and 24th, and took a pill containing calomel, antimonial powder, and a small portion of opium every fourth hour.

On the 25th, fomentations to the knees were directed, together with an anodyne draught. On the 26th, although perspiration had been profuse, she was not relieved; she was ordered to omit the pills, and to take an ounce of decoction of bark, with a fourth part of a grain of tartarized antimony every fourth hour; but she still complained greatly of the intense pain in her knees, which were more swelled, and œdema of the right leg was also observable: on this day a dozen of leeches were applied, and she went into a tepid bath. On the 28th, the pains were greatly relieved, the swelling of the joints was diminished, the medicines were continued, and the tepid bath repeated at her own desire. On the 1st of June, the fever had disappeared; she rested well; the pains were removed; she had a return of appetite, and the effusion into the joints was sensibly diminished: but on the 2d, there was an alarming change for the worse; I found her sitting up in bed, leaning forward, seemingly in great agony, the abdomen being very hard, tense and painful on the slightest touch; pulse quick, small and very feeble.

On particular inquiry, I found that on the 27th she had been affected with pain in her bowels and griping, which were removed by a dose of castor oil given her by the nurse, and she remained well till the evening of the 1st, when the above alarming symptoms occurred : she was bled without delay, and eighteen leeches were applied to the abdomen ; these measures were followed by fomentations and glysters, with small doses of neutral salts. The blood drawn was much buffed and deeply cupped ; the coagulum small, with fimbriated edges ; the serum in large quantity, and of a greenish hue. After blood-letting, the disease seemed greatly to remit in severity ; she said she felt quite well, and slept for some hours ; but pressure on the abdomen was still insupportable ; at night the symptoms of peritoneal inflammation recurred, and she sunk in a few hours.

On examination of the body, twelve hours after death, the following were the morbid appearances which presented :

THE ABDOMEN appeared to be very tumid. On cutting through the parietes, the small intestines, much distended with air, protruded from the cavity ; they appeared to fill the entire abdomen, while the large intestines, in a contracted state, were concealed from view. The peritoneum presented the appearance of having been the seat of a very acute inflammation, being uniformly coated with coagulable lymph of a dusky yellow hue ; on raising it, the membrane underneath was seen minutely vascular, of a bright

red colour : there was a considerable effusion of serum, with flakes of lymph floating in it. The stomach in particular was enormously distended with air ; the serous surface of the uterus and ovaria, in particular of the ovaria, was covered with a very thick layer of lymph ; the mucous membrane of the former organ shewed that much previous inflammation had existed in it, being also coated with lymph ; it was closely contracted. The mucous surface of the alimentary canal was healthy.

The liver appeared of a pale ash colour ; its surface covered with lymph, and its texture soft and flabby. The gall-bladder was distended with dark coloured bile, little of it being in the duodenum.

In the KNEE JOINTS, the entire of the synovial membrane internally was covered with lymph, closely adherent to it, and in its appearance precisely similar to that effused on the peritoneum. In each articulation there were about two ounces of serous fluid, also resembling that found in the abdomen ; bands formed of lymph stretched across the articulation in several places ; the surrounding fibrous structure was unaltered ; on raising the lymph from the membrane the latter did not present the vascularity which was exhibited by the peritoneum. The cartilages and bones were sound.

Acute rheumatism, while it retains its proper seat in the extremities, or in the superficial parts of the body, is very seldom a fatal disease ; but when that disease is translated to any of the vital organs, an inflammation is the consequence, sometimes obstinate, and always attended with considerable danger. The serous membranes of the brain, heart, and lungs, are those which generally suffer in metastatic rheumatism ; the serous membrane of the abdomen is more rarely affected, and hence the foregoing case, in which translation to the peritoneum took place, is worthy of notice, as tending to render the history of a very important and frequent disease more complete.

In the first volume of this work there are two interesting communications on the subject of conversion and metastasis ; one illustrates the conversion of disease from the skin to the serous membrane ; the other the translation of disease from the mucous membrane to the serous ;—of the latter occurrence I lately witnessed a striking example in the Richmond General Penitentiary, in a patient of the name of Reilly. Symptoms of peritoneal inflammation occurred while this individual was slowly recovering from fever : these symptoms were followed by effusion into the abdominal cavity to a considerable amount, fluctuation being evident ; a combination of crystals of tartar and jalap acted so powerfully on the mucous membrane of the intestines, as to produce mucous bloody stools, with alarming debility ; at the same time, however, the abdominal fullness



disappeared. On the abatement of the hæmorrhage ascites recurred with general anasarca. The recovery of this patient from the hydropic symptoms was slow, but before his discharge from the Hospital it was complete.

In the case of Daly we have an instance of the translation of disease to the serous membrane from the synovial, which is an order of parts still more remotely connected with it than either the mucous membranes or the skin. Yet we should not be surprized at seeing those two classes of membranes sympathizing, when we consider in how many points they resemble each other in their structure and functions, and in their diseases.

A CASE OF  
**SUDDEN DEATH,**

OCCASIONED BY

*OXALIC ACID.*

BY JOHN MOLLAN, M. D.

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ON the 12th of May I was requested to visit Mary Sleater, aged about forty-five years, residing near Donnybrook, who a few days before had received an injury on the left side of the thorax. I directed some blood to be taken from her arm, and a dose of sulphate of magnesia. Next morning I was much surprised to learn that she had died suddenly in the course of the evening. From her husband I obtained the following particulars of her death : between five and six o'clock in the evening she was bled ; there were then dissolved for her, in a large tea-cup full of water, two ounces of a substance which had been obtained from a druggist some weeks before, as Epsom salts, and of this solution she swallowed the greater part. Almost immediately after which she was attacked with vomiting, and complained of a burning heat in her stomach. An evacuation by stool and passed

and extremities soon became pale and cold, and the skin was partially bedewed with a cold sweat; the vomiting continued incessantly. She was laid upon a bed, when she exclaimed, "I'm gone, I'm gone!" She had a slight convulsion, and expired in about twenty minutes from the time of taking the draught.

Two or three drachms of salt were given to me which had been deposited from the remains of the solution; this was analyzed by Mr. Kiernan, Lecturer on Chemistry and Pharmacy at Apothecary's Hall, and it proved to be Oxalic Acid.

The body was examined about forty-six hours after death by my friend Mr. C. Johnson, and the following are the appearances which were noted on dissection:—

*Thorax.*—On raising the sternum the lungs did not collapse. The left lung was universally adherent to its parietes; the adhesion, however, was evidently of long duration; but towards the lower part, and corresponding to that part of the thorax which had received the injury, there were traces of more recent inflammation. The pericardium contained about two ounces of fluid. The right auricle and ventricle of the heart were considerably distended; on puncturing the auricle a quantity of air escaped, and the heart immediately collapsed. The blood contained in these cavities was dark and fluid, and had a number of air bubbles floating on its surface. The parietes of the ventricle were thinner

than common, as if they had undergone considerable distension. The left ventricle was less contracted than usual, but in every other respect was perfectly natural. The larynx, trachea, and upper surface of the epiglottis, were unchanged. On the œsophagus, at its upper part, there were slight traces of inflammation, which increased as it approached the stomach; in the lower part patches of coagulable lymph were thrown out, and in some places the mucous membrane appeared abraded.

*Abdomen.*—On opening this cavity nothing remarkable was to be seen at first view, except the great distension of the colon in part of its course, while in other parts its diameter was less than that of the small intestines. The stomach, when drawn out, presented the appearance of incipient putrefaction; at the great bulging extremity the mere laying hold of it between the fingers was sufficient to separate the serous from the other coats. In its cavity about eight ounces of a dark brown fluid were contained. The mucous membrane was thickened throughout its entire extent, and presented a mottled appearance, the greater part of a dark brown or blackish colour, as if blood was effused into its structure, whilst the interstices, particularly along the greater curvature, were similar to a finely injected membrane. The appearances of disorganization were most remarkable at the bulging extremity, yet I have seen the mucous coat separate with more facility in other morbid states of the stomach. The mucous coat of the duodenum, as far as its

second curvature, presented an appearance similar to that of the stomach, but less strongly marked. The jejunum and other intestines were of the natural appearance. The liver and spleen presented nothing particular. We were not permitted to examine the head.

Several individuals have been poisoned by means of oxalic acid, and in every instance this deleterious substance has been mistaken for sulphate of magnesia, which in appearance it strikingly resembles. The present fatal casualty arose from the druggist's assistant having, by mistake, filled the bottle which contained Epsom salts from the vessel in which oxalic acid was kept.

The appearances presented by the stomach in this case correspond with those which have been observed in similar dissections,\* but they appear insufficient to account satisfactorily for the very great rapidity with which death occurred; nor am I sufficiently acquainted with the properties of oxalic acid, or with the laws of the vital principle, to offer even a plausible explanation of the matter: to refer it to a specific operation on the nervous system would be merely a confession of ignorance.

One circumstance in this dissection deserves notice, from its infrequency, namely, the discovery of

\* London Medical Repository, Vol. I. p. 382.—Edinburgh Medical Journal, Vol. XIII. p. 249.

air in the right cavities of the heart. I am not aware that any thing similar has been observed in cases of sudden death produced by any deleterious substance, and I am at a loss to account for its production. That it was not gas evolved by putrefaction, I am well satisfied, as it had nothing peculiar in its smell, and there were but slight appearances of putrefaction in the other parts which were examined ; and as in cases where the putrefactive process has been far advanced, air has never been discovered in this organ. Morgagni\* mentions the case of a woman who was subject to " continual lipothymiaë," in whom the heart was found distended with flatus, and he supposed the possibility of its having existed during life ; but this I apprehend will not be admitted by modern physiologists.

The subject of the present case had been occasionally attacked with palpitation, but in other respects was healthy.

\* Let. XXV. Art. 13.

**FRACTURE**  
**OF THE**  
**NECK OF THE FEMUR,**  
**ILLUSTRATED BY DISSECTIONS.**

**BY A. COLLES, M. D.**

**ONE OF THE PROFESSORS OF ANATOMY AND SURGERY IN THE ROYAL  
COLLEGE OF SURGEONS IN IRELAND, &c. &c.**



**THE** unexpected success which I had met with in some unpromising cases of fracture of the neck of the femur, and the equally unexpected disappointments which I encountered in other apparently favourable cases, induced me, a few years ago, to turn my attention more particularly to the consideration of this injury. As the same treatment had been adopted in all these cases, I resolved to investigate the causes of this discrepancy, by dissection. The result of my research, during the period of about three years, I think it my duty now to communicate to my brethren; not that I conceive any useful rules of practice can yet be deduced from these observations, for the facts are too few in number; but be-

cause I think the statement will shew how rich a field of inquiry has been hitherto nearly neglected, and will naturally enlist in the investigation those Surgeons who are employed in anatomical pursuits, or entrusted with the charge of hospitals.

### No. I.

This was an old man, whose body was brought to the theatre of the College of Surgeons for dissection. We were totally unacquainted with the history of the fracture, which was found in the left femur.

The capsular ligament was remarkably increased in thickness and in closeness of texture. The fracture had taken place in the neck of the bone, near to the trochanter, but still within the capsular ligament.

The fractured surface of the upper piece exhibited many spots apparently covered with a cartilaginous incrustation: these appearances, on a more close examination, were found to be owing to the conversion of small portions of the bone into a substance resembling ivory. The lower fractured surface, widely expanded, was formed into a sort of cup, as if the bone had been rendered soft, and while in that state, had been acted upon by the upper piece, which was pressed on it by the weight of the body. One part of the edge of this cup-like face was formed of two pretty large fragmē



bone, which were closely connected to it by a strong ligamentous substance.

The round head of the bone was retained in the acetabulum by the ligamentum teres, which remained entire. The cartilaginous incrustation of its head was deficient in two or three small patches, and here the bony structure was uncovered. On the edge of one of these spots was a raised part, as if a small fragment had formerly been broken off and had adhered to the bone, without returning perfectly to its former level.

No intermediate substance held the fractured surfaces in apposition, each being connected with the capsular ligament by very strong ligamentous bands, which passed from the internal surface of the capsule to almost every point of the outer surface of the fractured pieces. Hence it is obvious that no effort of nature had been made to create a reunion between the two pieces of the fracture, and that the stability of the limb had depended upon the strength of those ligamentous bands by which each piece was connected with the capsular ligament of the joint, aided, no doubt, by the extraordinary thickness which the capsule had acquired.

## No. II.

The appearances which this fracture exhibited, in the recent state, were so very similar to the foregoing, that I determined on macerating the bones,

and examining more particularly the changes in structure which they had undergone.

The lower piece was formed into a cup-like surface, exhibiting many of those ivory-like spots; but the general texture of this widened part presented a vast number of regularly rounded cells or pores.

The fractured surface of the upper piece was divided by a middle ridge into two, of which the superior part was rough, and very little changed in appearance from that of a recent fracture, while the inferior presented many of the ivory-like patches. It was the inferior only of those surfaces which had moved in the cup of the lower piece of the fracture. All the surface of the bone, from the cartilaginous coating of the round head down to the fracture, presented numerous round cells or large pores.

Here again was an instance of an apparent want of effort to reunite the fracture; here too we observed, that the ligamentous structure which connected each piece of the bone to the capsular ligament, had established a very firm connexion, by inserting itself deeply into those pores or cells on their surfaces.

## No. III.

The following appearances were observed in the left thigh of a female subject, brought into the dissecting-room of the College of Surgeons, March 1818.

The left thigh bone was fractured transversely, and on a level with the brim of the acetabulum. Two strong ligamentous bands, one arising from the edge of the acetabulum, and the other from the internal surface of the capsular ligament, stretched across to the broken surface of the head of the bone, and seemed as if they had assisted the round ligament in confining the head in the socket. The head of the bone was perfectly sound, as was the ligamentum teres.

The two surfaces of the fracture, anteriorly admitted of a separation from each other to the extent of an inch, having at this part no other connexion than two or three tendinous bands, nearly an inch long, and very distant from each other. Posteriorly these surfaces were united together by a very strong ligamentous substance, which was so connected with the capsular ligament that it appeared as if it were formed by the ligament sending a thick production across between the fractured surfaces. At this place the capsular ligament did not morbidly adhere to the neck of the thigh bone.

The neck of the femur was evidently shortened, the lower surface of the fracture appearing expanded, as if it had yielded to the pressure of great weight.

The broken surface of the head had occasionally moved on the shaft of the femur, as low down as the small trochanter.

#### No. IV.

The following appearances were discovered in an old man about sixty years of age, whose body was brought into the dissecting room.

The spine of the ilium on the injured (left) side was not advanced so far forwards as that of the sound side, and the interval between the crest of the ilium and the last rib was less than on the sound side. The upper extremity of the great trochanter was on a level with the anterior spine of the ilium. The thigh was considerably smaller than the sound one, and was fully an inch shorter; the leg was wasted. The subcutaneous cellular substance of the buttock, the glutei, and some of the smaller muscles about the joint, were loaded with extravasated blood.

On cutting through the capsular ligament this membrane was found not less than a quarter of an inch thick in any part, and it was fully half an inch thick in many places; it had acquired a firmness of texture which might be described as semi-cartilaginous; it

was, however, divisible into two layers, the internal corresponding in thickness with the healthy capsular ligament; but this was attached nearer to the edge of the acetabulum, and in many places much higher up on the neck of the femur than natural.

The fracture, on a level with the edge of the acetabulum, was transverse; leaving, however, a sharp piece projecting on the inner and fore part of the head of the bone. Two pretty long and narrow fragments of bone also were seen connected with the lower fractured surface by a ligamentous union. In the substance of the capsular ligament, very close to its internal surface, two or three particles of bone were formed. It was not easy to decide whether these had been broken off in the moment of the fracture, or whether they were to be considered as new productions. All the fractured surface of the upper piece remained, as when recently broken, except about one third of it posteriorly. Here this surface was covered by the solid plate of bone which invests the neck of the femur, which was now softened, folded in, and laid down on the fractured surface of the head, so that it seemed as if, in the moment of the fracture, this coating had been torn from the neck of the bone, and remaining connected with the head, had projected beyond its fractured surface, but was subsequently laid down upon, and had united with it. The fractured surface of the neck was covered with a membrane, which, although strong, was of very unequal strength and thickness in

its different parts. On closer examination of this lower piece, it is remarkable that only a small length of the neck of the femur remained anteriorly; but at the posterior part no trace of it could be discovered.

The combined tendon of the psoas and iliac muscles appeared as if unravelled in its texture, or split into a number of softened tendinous threads. The bursa lying between this tendon and the os inominatum opened into the capsular ligament by a large hole. At this place the corresponding part of the upper fractured piece had a sharp projecting splinter, which in certain motions entered into this bursa; so that it seemed as if this sharp piece of the bone had either suddenly forced its way through the capsule of the joint and of the bursa; or had gradually caused their absorption, and then coming in contact with the superincumbent tendon, had produced this remarkable change in its texture.

#### No. V.

On the 25th of July, 1816, a woman, probably not less than eighty years of age, was received into the hospital for a fracture of the neck of the femur, the existence of which was clearly indicated, as well by the more usual symptoms, as by a crepitus of the bones, occasionally heard on examining the limb. From the time she received the injury till within a few days of her death (when she became comatose) she suffered much more pain than

is ordinarily observed in similar injuries. The limb rested on the outside, and every attempt to alter this position was attended with excruciating pain ; while every expedient for keeping the limb quiet was rendered ineffectual by her inability to continue in the same position for any length of time. A sphacelated state of the nates hastened her dissolution, which took place on the 14th of September.

#### DISSECTION.

On the anterior part of the thigh, immediately below Poupart's ligament, a considerable fulness was conspicuous ; it was found to extend about a hand's breadth from the great trochanter inwards, while the hollow on the pubic side of the artery was natural. A sharp piece of bone was felt on a line with the anterior spine of the ilium. Some ecchymosis was found below the tensor vaginæ femoris, in the vastus externus, and in the cruræus muscles. Within the substance of the iliacus muscle a large abscess was discovered, which contained good pus ; in the bottom of this abscess there was a large circular opening through which a probe being passed led to the fracture. The fracture appeared to have taken place external to the capsular ligament, and to have passed through both trochanters.

This was an instance of a fracture of the bone much more complicated than any I have ever seen. For, while the neck and head were separated, in one piece,

from the shaft, the upper end of the shaft and the trochanters presented not fewer than four pretty large pieces, besides a portion of comminuted bone; the largest of these four pieces, surmounted by the great trochanter, formed nearly a semicircle round the neck of the bone; the lesser trochanter was found on one of the anterior fragments. The extremity of the shaft was hollow, while the fractured extremity of the neck was irregularly convex. The cavity of the joint communicated with the fracture by an opening half an inch long, which was formed at the place of insertion of the ligament into the neck, on the anterior part of the bone, in a line with the anterior spinous process of the ilium. It is difficult to say whether this communication was made by a laceration of the ligament at the time of the fracture, or whether the capsule, which had been left entire, and escaped the violence of the injury, was subsequently opened by ulceration, and thus the matter have obtained access to the cavity of the joint.

The neck of the bone exhibited some appearances of inflammation, even to the edge of the articular cartilage. A slight excess of vascularity was perceptible at the insertion of the round ligament. The os innominatum was perfectly sound.

#### No. VI.

The capsular ligament was very much thickened. The first striking appearance was the depressed posi-



tion of the head of the femur, the higher part of which, in a back view, was found on a level with the top of the trochanter major, while the lower border rested upon that sweep of bone which runs from the root of the great to that of the small trochanter. In a front view the lower border of the head lay almost in contact with the small trochanter, while a point of the broken neck rose higher than the uppermost part of the head of the bone. This was obviously the end of the fractured neck, as it lay far within the attachment of the capsular ligament. The fracture had taken place transversely, and close to the head of the bone; the fractured pieces were connected together by a ligamento cartilaginous substance of considerable thickness. This substance was in greater quantity, and of a more dense texture at the superior than towards the inferior part of the fracture, where it degenerated into threads of ligament. This substance was obviously not produced from the capsular ligament, for we saw it covered by that reflected portion of the synovial membrane, which in a healthy state invests the neck of the femur. A vertical section of the fractured pieces is the subject of Plate 2, Fig. 2.

From a view of this plate it is plain that no part of the neck of the bone can be discovered except its base, to which the head was united in such a manner that two upper thirds of its fractured surface were connected with the remnant of the neck by the ligamento-cartilaginous substance above mentioned, while the lower third of the fractured

surface of the head was either totally free from all connection, or united to the neck only by a lax ligamentous band. The edge of the acetabulum, immediately below the anterior inferior process of the ilium, was somewhat flattened, at least in its cartilaginous part.

Here is a striking instance of the almost total removal of the neck of the femur, subsequently to a fracture; and this presents us with the example of a mode of union precisely similar to that which generally unites the fractured olecranon to the shaft of the ulna.

I must confess that I was not prepared to expect the peculiar appearances which the following cases presented :

#### No. VII.

The fracture was transverse, and close to the head of the femur. The capsular ligament was very much thickened, and its internal surface coated with coagulated lymph. The fracture, however, was incomplete; for the external bony coating of the neck of the femur remained unbroken for nearly half the circumference of the bone at its posterior part, and was reduced to the softness and whiteness of cartilage. To the internal surface of this unbroken portion adhered many bony fragments of different sizes, which, by the violence of the fracture, appeared to have been torn away from the reticular substance

of the bone, retaining their connexion with this coating. Along the anterior part of the fracture, where the external coating had been broken, we found its torn edges projecting beyond the fractured surface, in some places to a height of a quarter of an inch, in others less, and all those projecting portions reduced to the softness of a membrane.

At that part of the head of the femur which in the ordinary position would correspond with the posterior origin of the rectus femoris, a portion of bone appeared to be wanting: whether this had been caused by a splintering of bone, or had been produced by some process which took place after the fracture, is uncertain; but I am disposed to ascribe it to the former, for still higher up on the bone was an appearance of a fissure; all this part, from which it may be supposed the splinter was detached, was covered by a thick and vascular membrane, extending from the fissure down to the edge of the fracture, so that little more than the mere edge presented a bare surface; the capsular ligament corresponding with this surface was very much thickened. Near the centre of the fractured surface of the upper piece, a small portion of very solid bone appeared, as if it had been forcibly driven into the cancellated structure of this part of the bone. The round ligament was highly vascular and inflamed. Scarcely any vestige of a membranous texture could be discovered on the broken surface of the upper piece; the corresponding surface of the lower

piece was only in some places covered with a membrane

### No. VIII.

The fracture in this instance also was transverse, and close to the head of the bone ; but towards the posterior part of the neck, the two pieces of bone remained connected with each other by a broad and thin band of the external coating of the neck, which was unbroken : this band was not less than an inch in breadth ; it was palpably a continuation of the external coating of the bone, while its internal surface was as rough as a piece of coarse sand-paper, which roughness was caused by small particles of the reticulated part of the bone remaining attached to it. This band had no connexion with the capsular ligament.

The broken surface of the head of the bone was covered, except in a very few points, with a substance of a ligamentous texture ; this was almost one eighth of an inch thick. When the two fractured pieces were drawn asunder, we saw some fibres of this ligamentous substance passing from the surface of the one to that of the other, as if to form a connecting medium between. Some small detached portions of the covering of the bone, now reduced to a cartilaginous state, were imbedded in the ligament, which covered the broken surface, and imbedded in the ligament, which covered the broken surface.

the neck, in one part, was turned inward, laid upon the broken surface, and intimately connected both with the bone and the new membrane. Although the fracture was transverse, yet at the anterior and internal part a splinter, half an inch broad, and nearly as long, remained connected with the head.

The fractured surface of the lower piece had, in the middle, a circular depression, capable of receiving the end of the thumb. In no part did the edge of this piece indicate that the splinter on the upper fragment had been detached from it.

This depression was covered with a soft ligamentous substance, while the internal surface of the edges exhibited the bony structure uncovered.

This lower piece was so very short within the capsular ligament, as at first sight to lead us to suppose that the fracture must have taken place close to the trochanter, and this impression could only be removed by examining the upper piece, and observing how close to the ball the fracture had occurred. No fragments of bone lay detached, the apparent want of the neck could not be caused by a comminuted fracture, and therefore it must have been occasioned by those processes which had been going on subsequently to the receipt of this injury.

## No. IX.

This case was so very like, in the leading features, to the two foregoing, that I deem it unnecessary to detail the particulars.

When I saw the first of these three cases, I could scarcely believe it to be an instance of fracture of the femur; nor should I even now venture to insert it here, were it not proved by the second (No. 8), which occurred in a patient received into Dr. Steevens's Hospital.

## No. X.

This bone was found in an adult subject, whose body was brought into the dissecting room.

A vertical section of the bone presented the following appearances: The head perfectly healthy and natural; the angle formed by the neck and shaft of the bone differed very little from the natural angle. The neck, of full length, was laid across the extremity of the shaft in such a manner, that the fractured end of the upper solid plate of the neck lay in contact with the end of the external plate of the shaft; while the lower solid wall of the neck passed to almost midway within the canal of the shaft; this lower wall had lost considerably of its compact texture, as if resolving into large cancelli. The medullary canal at

was crossed by a partition of solid bone, on which the extremity of the neck rested. Immediately below this transverse bony partition the medullary canal appeared destitute of cancellated structure, and extremely vascular as far as its cavity was exposed.

A thin blue layer of a substance intermediate between ligament and cartilage, was every where interposed between the neck and shaft of the bone, and also between the neck and the new irregular bony masses. A similar blueish cartilaginous substance was also interposed between the different portions of the irregular masses.

The neck of the bone retained its full length and size. After maceration it appeared that the periosteum of the neck remained unaltered.

From a view of this section, it is plain that the fractured pieces were held together partly by the neck resting on the shaft, partly by the irregular osseous matter thrown around it, but principally by the interposed blue cartilaginous substance above mentioned. The quantity of motion allowed between the two fractured pieces was very inconsiderable, indeed, while the bone was in a recent state.

#### No. XI.

This was an old male subject, remarkable for the great number of exostoses growing from many of the long bones. The right femur had no fewer than five, besides a large quantity of bony mat-

ter which was thrown irregularly around the shaft and neck of the bone. The neck appeared considerably shortened, and lay at right angles with the shaft. A vertical section shewed that the neck had been fractured near to the trochanters, and lay across the top of the shaft, its broken extremity in contact with the outer plate of the shaft. The external solid walls of the neck were very thin; but whether this condition was natural, or one of the effects of the injury, is uncertain. The orbicular ligament was very much thickened, and the soft parts in the bottom of the acetabulum increased in bulk, and rendered highly vascular.

A very thin cartilaginous plate was every where interposed between the neck and shaft. The new osseous production could have very little assisted in keeping the fractured pieces in apposition; for it was principally thrown out about the trochanters, a small portion only being formed below the neck; yet the motion allowed between the neck and shaft of the bone was so very inconsiderable, that it required a close inspection to discern it; so that in this instance the new osseous matter contributed very little to the consolidation of the broken bone, the firmness of which (inferior only to a junction by bony ankylosis) must therefore be ascribed entirely to the interposed thin plate of cartilage. There was not any bony partition between the neck and medullary canal of the shaft.

In this instance the firmness acquired was n



greater than that of No. 10, although the bond of union was the same in both. It must be remarked, however, that this cartilaginous substance was much thinner in the latter case.

I shall not offer any apology for the length of the preceding statements. Fracture of the neck of the femur has long been considered as one of the opprobria of surgery; and every one will admit that the stock of facts, from whence rules of practice in the treatment of that injury have been drawn, is very scanty. The dissections which I have now brought forward do not, I apprehend, form a collection sufficiently extensive to lead to many pathological inferences: the following, however, I shall venture to subjoin, although it is not improbable that further observation may force us to modify or relinquish some of them.

It is very plain that a fracture may take place either near the edge of the acetabulum, or in any part of the length of the neck of the femur, and also that a fracture may take place close to the capsular ligament, and yet exterior to it. The efforts of nature to repair the injury are independent of the seat of the fracture, and yet they present varieties which have hitherto been overlooked. Thus, in the two first of the foregoing instances, the broken surfaces moved on each other, and were converted into a state approaching to ivory. No attempt had been made to re-unite the fracture, and the pieces of bone were held in apposition only by new ligamentous produc-

tions from the capsular ligament, which are inserted into the external surfaces of each piece.

In No. 3. there had been a slight attempt made at re-union. In Nos. 7, 8 and 9, we observed a phenomenon, which, I believe, is now for the first time mentioned, a fracture of only part of the bone. No. 6 presented us with that mode of re-union which some have supposed the most perfect of which this fracture is susceptible. While Nos. 10 and 11 exhibit a mode of re-union, very little inferior to callus in point of firmness, but very different in its nature, and which I conceive is peculiar to the fracture of the neck of the femur.

The circumstances which I found common to all these fractures were, that the capsular ligament was not lacerated (except, perhaps, in No. 5). Hence may be inferred the fallacy of Sabatier's reasoning, in ascribing the pain which is occasioned by moving the fractured limb to the friction of the broken surface against the flesh (*chairs*) in its vicinity: In every instance I remarked the increased thickness of the capsule. It is curious that although this membrane exhibited in eleven cases such manifest proofs of previous inflammation, yet in none of them could we discover any adhesion between it and the outer surface of the neck of the bone.

Another circumstance attending these fractures, worthy of observation, was the removal of all or the greater part of the neck of the femur, which had

taken place in seven instances, wherein there were attempts at re-union; and even when re-union had taken place, as in No. 6, by a ligamento-cartilaginous substance. This disappearance of the neck is a fact long since observed, but not yet fully explained.

Although the ligamentous bands seem in a majority of instances to have proceeded from the capsular ligament, yet it is evident, from No. 6, that these may arise merely from the broken surfaces of the bone; for, in this case, not a single fibre was attached to the capsular ligament, the new bond of union being covered by the reflected portion of the synovial membrane or periosteum of the neck. We have an illustration of this in Ruysch, Tab. 1. Thes. 9.

Nos. 10 and 11 were instances of a mode of union which demands particular attention. The bond of union would seem, from the Plate Fig. 3, to have been of considerable thickness. It should be recollected, however, that the interval between the neck and the new osseous production was considerably increased by the drying up of the newly formed substance; for the drawing was made from a preparation taken out of spirits, and dried. In No. 11 this intermediate cartilage was so very thin, and retained the fractured piece in such close contact, as to render the motion allowed between the parts of the bone very obscure.

In Nos. 7, 8 and 9, we cannot overlook those

changes which had taken place in the unbroken portion of the neck, which was softened, so as more to resemble a soft and very pliable cartilage than a bone ; and we find that when so softened it was laid down upon the fractured surface and united to it.

How far these instances will explain the case of fractured neck of the femur, in which the patient is still capable of walking, and in which no shortening of the limb takes place, must be determined by future observations.

**OBSERVATIONS**  
**ON THE**  
**OPERATION**  
**FOR**  
**ARTIFICIAL PUPIL,**  
**ILLUSTRATED BY CASES AND ENGRAVINGS.**  
**By E. RYAN, M. D.**  
**SENIOR SURGEON TO THE KILKENNY COUNTY HOSPITAL, &c.**

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**THE** number and variety of the diseases of the eye, particularly of those requiring the operation for artificial pupil, which have fallen under my observation within these few years, have afforded me an opportunity of ascertaining the comparative success of the different methods of performing that operation; and hence the cases detailed in the following pages will, I should hope, prove not unacceptable to the professional reader.

The opinion of surgeons was formerly unfavourable to operation for artificial pupil, which, if not

abandoned as hopeless, was at least performed without any sanguine expectation of benefit. But so much attention has recently been paid to ophthalmic surgery, and the late improvements in this department of our art have been so great, that the advantages of the operation are now pretty generally admitted, and the process itself, by some, is supposed nearly to have attained perfection.

To those who are acquainted with the writings of Demours, Gibson, and Sir William Adams, the publication of the following cases may, at first sight, appear superfluous; but I should conceive that every case must possess considerable interest which tends to shew the fallacy of the opinion which some still entertain, namely, that however promising the immediate effects of the operation, its ultimate failure is inevitable, from gradual obliteration of the new pupil: the patients, whose cases will be added, were carefully watched in all the stages of their disease, and some years have elapsed since they were operated upon.

Many reasons have been assigned for the frequent failure of this operation, but the chief cause has probably been overlooked. According to my view of the matter, disappointment has arisen chiefly from our not having adapted the most appropriate operation to each particular case: nothing can tend to counteract our endeavours more completely than a prepossession in favour of any one mode of operation, or an adherence to the rules laid down by any writer,

however high his reputation. For example, I cannot coincide with Sir William Adams in the view which he has taken of the cause of the failure of Cheselden's operation, which he has of late revived. His method of introducing the knife, or the double edged needle (for it appears to me a matter of indifference to which the preference is given,) is unquestionably a great improvement ; but I have never found it necessary to place any portion of the lens, or its capsule, between the edges of the newly formed pupil. I cannot discover any advantage in this step ; and from analogy I am led to consider these parts as extraneous substances, which would be likely to produce inconvenience when fixed between the edges of the newly formed pupil. Indeed this operation is not that which is most generally applicable ; it is not only ill adapted to the cases for which he recommends it, but would be highly injurious in many of them.

The case of Mary Bryan, the first of the following series, will demonstrate that such a step in the operation is unnecessary. This case has been selected as the most unfavourable that could present for the performance of Cheselden's operation, and yet none could prove more successful. The eyes were much sunk in the sockets ; the vitreous humour was disorganized ; the iris, from its full orange colour, afforded ample evidence of previous high inflammation ; the anterior chamber of the eye was much narrowed by the convexity of the iris, and its near approach to the cornea : yet, under all these discouraging appearances, did the operation succeed per-

fectly, though the lens and its capsule were designedly allowed to remain in the posterior chamber of the eye. The iris was divided almost completely across its diameter, close to the ciliary ligament, a practice which I have always followed in such cases, and the capsule and lens were afterwards broken in pieces. When this is effected there can be but little cause to apprehend that the pupil will again coalesce. To this description of case, and to closure of the pupil after the operation for cataract, is the operation of Cheselden peculiarly adapted, and to such, I conceive, it ought to be confined.

In the case of T. Kealy, the second in order, a different operation was performed on each eye. Cheselden's operation was performed on the left eye; the iris was divided; the newly formed pupil never shewed any disposition to re-unite, but the operation on this eye required repetition, as the lens and capsule became opaque from having been wounded. The disadvantages attending the repetition of operations on the eye, either for artificial pupil or cataract, must be too obvious to require animadversion. In Cheselden's operation for artificial pupil, where the lens has not lost its transparency, its destruction follows as a necessary consequence of the operation. It may, perhaps, be said, that the performance of a second operation might be avoided by dividing the lens and its capsule in the first instance; but this, even were it desirable, cannot always be effected, as the iris, when wounded, will sometimes pour out so much blood as to obscure the anterior chamber of the eye,



and thus render the completion of the operation impracticable : this happened in the case of Bryan, and rendered a second introduction of the knife necessary, in order to complete what might have been accomplished at first but for that circumstance.

Every person must allow that it is highly desirable to preserve the lens, and that an operation, in which its destruction is inevitable, ought to give place to a method of more easy performance, by which the lens is not endangered; namely, that which was adopted in operating upon the right eye of Kealy. Indeed it is scarcely necessary to add any thing to the statements of Demours and Gibson to shew the superiority of that operation, which was first performed by Demours, and subsequently by Gibson, over one where parts of the highest importance to vision are unavoidably destroyed.

The result of this operation on Kealy will also counteract an erroneous opinion into which practitioners may possibly be led by Mr. Gibson, who seems to consider that where the operation for artificial pupil has been successfully performed on one of the eyes, vision cannot be further improved by operating upon the other : now Kealy, with one eye, can distinguish all objects on one side of him, and with the other all objects above and opposite to him ; and thus a degree of sight greatly superior to what the operation upon one eye only could have procured for him, has been obtained by the performance of an operation upon both.

But while I venture to dissent from an author so respectable as Mr. Gibson, I cannot avoid bearing testimony to the superiority of his operation for artificial pupil (when a considerable part of the cornea is opaque, and the lens transparent,) over every method practised or recommended before or since his time. The case of Mr. Creighton does not militate against this mode of operating, when the lens is transparent; in that case, indeed, had Mr. Gibson been previously aware of the opacity of the lens, the operation of Cheselden ought to have been preferred; which operation, combined with the division of the capsule and lens, would probably have been attended with more success than that which Mr. Gibson performed. The objection made to it by Mr. Gibson, on account of the danger of the cornea becoming opaque from inflammation, caused by its division, has been shewn to be insufficient, by the successful event of his operations. The operation of puncture of the cornea, proposed by Mr. Wardrop, does not appear in a single instance to have been attended, in his hands, with this result; nor has it ever happened to myself, although I have repeatedly performed it. The cases of Shee and Mulvany will, I hope, fully establish its superiority under such circumstances. In twenty hours after the operation for artificial pupil on both these persons, the most minute examination did not enable me to discern the part of the cornea that had been divided. In a week Shee was able to return home without a guide, and Mulvany on the twelfth day afterwards. The latter, on whom the operation was performed above two years ago,

called upon me a few days since, and stated that he had been able to earn his bread, since the operation, as a day labourer. It must be obvious, that the operation of Cheselden would have proved highly disadvantageous in these cases. The great benefit of the preservation of the lens will, I presume, be admitted, as the most useful vision followed both of these operations without the aid of cataract glasses, which is no small matter to persons in any rank of life, but more particularly to the lower classes, who have strong prejudices against their employment.

The operation of puncturing the cornea, and drawing the iris through the wound, in such a manner as to bring the natural pupil opposite the transparent portion of the cornea, proposed by Sir William Adams as a substitute for Gibson's operation, seems highly objectionable. It increases considerably all the dangers which he apprehends from Gibson's operation. I cannot for a moment conceive that the risk of opacity of the cornea, from a simple incision, will be lessened by drawing the iris through the wound, and allowing it to remain strangulated there. Repeated experience must convince every one who is conversant in the treatment of diseases of the eye, that wounds of the cornea, accompanied or followed by protrusion of the iris, rank amongst the most painful class of inflammatory affections of that organ, and are most difficult to relieve. This alone would deter me from the performance of such an operation. But, moreover, the puncture which would be sufficiently large to allow a portion of the iris to

escape through the cornea, and to adhere to it, would fully suffice for the removal of a part of the iris, adequate to the formation of an artificial pupil. A new pupil may be permanently formed by this method of operation, and there will be no necessity for its repetition, which most likely will be required after Sir W. Adams's operation, as the iris frequently recedes within the wounded cornea when the aqueous humour is regenerated. In the one case the patient is freed from the irksome and painful consequences attendant upon an operation that must necessarily induce inflammation, whilst in the other his chance of vision is much diminished by an operation, which, if performed as Sir W. Adams directs, will probably leave an opacity of the cornea, such as is generally produced by adhesion of the iris to that tunic when it is wounded. The operation of Gibson, carefully performed, leaves no trace of muddiness behind.

The knife, which I have always employed in the division of the cornea for artificial pupil, is that recommended by my friend, Mr. J. Wardrop, when describing his method of extracting cataract. The operation proposed by Scarpa, for artificial pupil, though it may be one of which necessity will at times oblige us to avail ourselves, is liable to many objections; but I shall reserve the consideration of this part of the subject, as well as some other matters materially concerned in the perfect performance of this operation, for a future occasion.

## CASE I.

Mary Bryan, *ætat.* 30, a poor woman, from the county of Tipperary, applied to me on the 15th of July, 1813, and stated that her sight had been considerably impaired by a violent attack of ophthalmia, eleven years before. For more than seven years she had been deprived of the sight of both eyes, and could scarcely distinguish the brightest day-light from night. The pupil of each eye was nearly obliterated, scarcely larger than a pin's head, and motionless; its border was puckered; three-fourths of the iris dove or fawn coloured. Through the very small pupil the lens and its capsule appeared to be opaque. The iris was convex on its anterior surface, and approached the cornea so closely as to narrow considerably the anterior chamber of each eye, which was much sunk in the socket. Notwithstanding these unfavourable appearances I was induced to perform the operation for closed pupil on the right eye. A very narrow bladed iris-knife (Mr. Adams's) was introduced into the eye at its temporal margin, about a line behind the iris, through which its point was pushed close to the ciliary ligament into the anterior chamber of the eye, and pressing the knife cautiously backwards (for fear of wounding the cornea), its point was carried to within a line of the cornea, at its junction with the iris on the nasal side. The iris was there divided across its whole diameter, but this was accomplished with some difficulty, from its thickened state, as well as the state of the capsule of

the lens to which it adhered. In consequence of this the divided edges of the iris retracted but little; the anterior chamber of the eye became obscured by an effusion of blood; the knife was therefore immediately withdrawn, very slight inflammation succeeded the operation, and the effused blood was completely absorbed on the third day. In a fortnight afterwards, the capsule and lens of this eye were freely divided; the divided edges of the iris immediately receded, leaving a large oblong pupil. On the same day an operation, precisely similar to that on the right, was performed on the left eye, but this was followed by so much inflammation as to acquire abstraction of blood both local and general.

When the inflammation had subsided the lens and capsule of this eye, which were also opaque, were divided: In some weeks after the operation she was able, with cataract glasses, to distinguish every colour and object, and to thread a fine cambrick needle. She was led to Kilkenny, and walked home to Thurles, a distance of thirty miles, without a guide, and has since been able to earn her bread as a dairy woman. The pupils of both eyes are oblong.

—Vide Plate 3.

## CASE II.

Thomas Kealy, ætat 23, a pensioner of the 44th regiment, applied to me on the 24th June, 1813.

Whilst doing duty at Guernsey, some years ago,

he was attacked with Egyptian ophthalmia in both eyes, the complaint being then prevalent in that island. The disease terminated in almost total blindness, leaving only such a degree of sight as enabled him to distinguish day from night. He was discharged incurable from his regiment, and returned to Kilkenny, his native town, where he was led about for years. The whole of the centre of the cornea of both eyes was opaque, leaving only a small portion of its circumference transparent. The anterior chamber of each eye was much narrowed from adhesion of the border of the iris to the cornea, the eyes were deeply sunk in the sockets, had lost their plumpness, and had that inelastic feel usually accompanying a disorganized state of the vitreous humour.

A very small iris-knife was introduced through the sclerotica, at about a line's distance from its junction with the cornea, on the temporal side of the right eye. The point of the knife was then passed through the iris into the anterior chamber of the eye, and carried thence cautiously till it was obscured by the opacity of the cornea; this was effected with difficulty, from the narrowness of the anterior chamber of the eye: the iris was then divided in withdrawing the knife, and it retracted freely. He was immediately able to distinguish objects.

In the left eye a different mode of practice was adopted. A very small cornea-knife was introduced at the upper-transparent part of the cornea on the

temporal side, the back of the knife being kept towards the opaque spot on the cornea; the knife was passed cautiously at about the distance of three lines through the cornea on the opposite side, and its edge was brought out at the distance of a line from the upper part of the cornea, making a very small flap at the upper part of the eye, something similar to that formed in the operation for extracting cataract. Through this opening a small portion of the iris immediately protruded, and was cut off with curved scissars. Acute pain of both eyes followed the operation, which was relieved by bleeding and purging. In a few days after the operation, the lens and capsule of the right eye, in consequence of the injury done to them by the knife, became opaque, and completely deprived him of the sight of it; the divided iris had remained perfectly open. With Scarpa's needle passed into the posterior chamber of the eye, the lens and its capsule were torn to pieces, particular care being taken that no part of either should enter the anterior chamber of the eye, or get between the divided edges of the iris. In a very short time he was able to walk about without a guide, to distinguish every colour and object with both eyes, and to attend to most of the ordinary business of life. His sight has considerably improved since the operation, and he is this day, July 12th, 1818, about five years since the performance of the operation, as well as he has been at any period since its performance. —See Engraving of his case, Plate 4.



## CASE III.

J. Shee, *stat.* 40, a labourer from Tramore, in the county of Waterford, was led to me to Kilkenny, on the 14th July, 1814. He had lost the sight of the right eye when a child; three years ago the sight of the left eye was nearly destroyed by a violent attack of inflammation; a large opaque spot obscured the centre of the cornea, and covered the entire pupil, which, however, dilated so much in the dark, as to shew that there was no adhesion of its border to the cornea, and also to shew that the lens and capsule of the eye were free from disease. His sight was so imperfect, however, that he required a guide to lead him.

An incision of about three lines in breadth was made in the cornea about a line anterior to the iris at its temporal side, and a little below the centre of the iris. On withdrawing the knife the aqueous humour immediately escaped, but no portion of the iris followed. A small hook was then introduced through the wound in the cornea, the border of the iris was laid hold of, drawn through the wound, and cut off with curved scissors. The anterior chamber immediately filled with blood; the eye was covered with some mild dressing, and when examined in twenty hours after the operation, the effused blood had been completely absorbed, and the minutest inspection could not detect the wound made in the cornea. A large square pupil had been formed, and he was able

to see a variety of objects. On the seventh day after the operation he walked home without a guide, able to distinguish every colour and object. No inflammation followed this operation. See a representation of his eye, Plate 5, Fig. 1.

#### CASE IV.

T. Mulvany, a labourer, atat. 33, was brought to me to Kilkenny from the County of Leitrim, on the 17th of May, 1816. He lost the sight of the left eye three months ago by an accident; it was affected with staphyloma of a considerable size, and afforded no prospect of improved sight from an operation. He in some weeks after the accident nearly lost the sight of the right eye from inflammation, which left a large opaque spot in the centre of the cornea, exactly opposite the pupil, occasioning such indistinct vision as scarcely to enable him to distinguish day light. The pupil, in a dusky light, dilated freely; the lens and its capsule were free from disease. The cornea was divided precisely in the way described in the last operation, the knife being withdrawn, the aqueous humor followed it, and the border of the iris then passed through the wound; it was raised by a pair of small eye forceps, and cut off with the curved scissors. He did not complain of pain during the operation. The eye was then lightly dressed, and he was directed to lie in bed; the day following the eye was minutely examined, but no trace of the cornea could be discovered. No

inflammation whatsoever of the eye succeeded the operation; the new pupil was quite visible, but the eye had not recovered its plumpness, the aqueous humor not being quite regenerated. Vision was much improved, and he was able to distinguish the number of panes in a small window in his room, which he could not do previous to the operation. On the fifth day after the operation he was able to walk without a guide, and to distinguish colours and objects; the aqueous humor, however, continued slightly turbid, and the cornea had not recovered its perfect transparency. On the twelfth day he returned home, grateful for the benefit he had obtained, being able to distinguish every colour and object, and to read large print.—See Eng. of his eye, Plate 5, Fig. 2.

#### CASE V.\*

J. Hunt, a labourer, from Roscrea, in the county of Tipperary, came to me to Kilkenny on the 6th of July, 1816. Having lost the sight of his right eye about five years before, from an accidental wound with the point of an awl, he could not distinguish any object with it. A semicircular cicatrix was observable on the cornea at its nasal side, through which the inner border of the pupil had prolapsed, and to which it adhered, nearly obliterating the pupil, which was not larger than a pin's head. It was

\* Although the following cannot be strictly called artificial pupil, being rather a restoration of the old pupil by an operation, yet it appears sufficiently interesting for publication.

quite immoveable, and covered by the cicatrix. The sight of the left eye was indifferent.

The cornea was pierced with a very small iris knife (convex at its point) at about a line from the sclerotica, on its temporal side, and a little below the inferior point of the cicatrix. It was passed cautiously along the front of the iris, obliquely upwards, until it reached that part of the iris which adhered to the superior point of the cicatrix. The point of the knife was passed cautiously downwards along the adherent iris, which was separated from the cornea. The knife moved in this way by merely elevating its handle. The pupil immediately regained its natural situation, and he could see more clearly than before the operation. No inflammation followed. The sight having daily improved, he was able to distinguish every colour and object with this eye, to attend to any kind of labouring work, and returned home in a very short period after the operation.—See Plate 5, Fig. 3.



## ADDRESS

TO THE

MEDICAL PRACTITIONERS OF IRELAND,

BY THE EDITORS.

---

IN the latter end of the summer of 1817, the Editors of the Dublin Hospital Reports and Communications in Medicine and Surgery, having understood that continued fever had prevailed in various parts of Ireland for six or eight months; conceived that, by making their work the vehicle of authentic information respecting so general a calamity, they would perform a service acceptable to their brethren of the Profession; and permission having been liberally granted to them by the Postmasters General to carry on a correspondence free of expense, they instituted an inquiry into the state of the public health, by circulating the following queries :

*“ Dublin August 20th, 1817.*

“ 1. Has fever been unusually prevalent in your neighbourhood during the summer ?

“ 2. At what period was the unusual prevalence observed, and when was it at its height ?

“ 3. Has there been any peculiarity in the form of the disease?

“ 4. What were the organs chiefly affected? If the lungs,—what were the symptoms of pulmonic irritation? Did such symptoms appear early in the disease? Did they abate as the disease advanced? If the brain,—what were the symptoms of cerebral excitement? Did flushing, headach, and inflamed eyes appear early in the disease? Were these symptoms followed by delirium, subultus, coma, &c.? Did an affection of the brain frequently appear upon the subsidence of the affection of the lungs, and did it end in sleep? If the abdominal viscera,—what were the symptoms? Was there much tension or tenderness of any part of the abdomen? Were there tormina, tenesmus, or bloody mucous stools?

“ 5. Was the disease in general attended with petechiæ, or any other affection of the skin?

“ 6. Was there much uniformity in the symptoms and progress of the fever during the whole course of the epidemic?

“ 7. What was the mean duration of the disease?

“ 8. What was the mode of crisis?

“ 9. Was convalescence interrupted by catarrhal or dysenteric symptoms?

“ 10. Were relapses frequent?

“ 11. Were there any preceding or concurrent diseases?

“ 12. What was the relative proportion of males and females affected by the epidemic?

“ 13. What was the rate of mortality—in the upper ranks—among the poor—among the troops—in men—in women—in hospital—out of hospital?

“ 14. Does the epidemic still exist, or has it yielded to  
 “ any other mode of fever ?

• 15. Do you attribute the frequency of fever to any pe-  
 “ culiarity of the season, or of the food of the poor ? or  
 “ were you able distinctly to trace the origin of the disease ?

“ 16. Were many individuals in the same house, school,  
 “ manufactory, prison, or public institution, affected at the  
 “ same time, or in succession ? and at what intervals ?

“ 17. Were any extraordinary measures adopted by the  
 “ more respectable inhabitants, or by the magistracy, for  
 “ the suppression of the disease, or the accommodation of  
 “ the sick ?

“ 18. Previously to the epidemic, or during its preva-  
 “ lence, was any epizootic disease observed ?”

The foregoing procedure was suggested by the circular letter which the Medical Society of London sent to their corresponding members in 1803, relative to the influenza of that year. But, while the Editors adopted that precedent, in as far as it was applicable to the present case, they deemed it expedient to refrain from inquiring into the methods of treatment pursued by the gentlemen to whom their circular letters were sent ; intending to apply for information, with regard to practice, at a more advanced period of the epidemic, or when they should ascertain that it was upon the decline.

Accordingly, in the latter end of the spring of 1818, having heard that the epidemic was abating in many parts of the country, the Editors circulated a second series of queries, of which the following is a copy ; and at the same time they requested such additional information as the experience of their correspondents might supply.



*Dublin, April 20th, 1818.*

1. " When the Epidemic Fever appeared in your  
" neighbourhood, were many of the labouring poor out of  
" employment? In what state were they with respect to  
" fuel, clothes, and food? Had any part of them subsisted  
" on articles not usually employed as food?

2. " In what month was the Epidemic at its height?

3. " Has it abated, or is it abating, in frequency and  
" severity; and if so, to what do you attribute the abate-  
" ment?

4. " In what proportion have the inhabitants of your  
" district been affected with the Fever?

5. " What has been the rate of mortality, among the  
" upper ranks, and among the poor?

" If you have a Fever Hospital in your neighbour-  
" hood, be pleased to send a list of the admissions,  
" discharges, and deaths, monthly, since its estab-  
" lishment.

6. " Can you ascertain the excess of mortality of the  
" year ending 31st March, 1818, over the average mor-  
" tality of the last four or five years, in any parish or  
" parishes in your neighbourhood?

7. " In the progress of the Epidemic, did the disease  
" undergo any change with respect to the organs chiefly  
" affected; or with respect to its duration, to the mode  
" of crisis, or the tendency to relapse?

8. " What have been the morbid sequelae of the Fever?

9. " Have you made any dissections, and what has been  
" the result?

10. " What mode of treatment have you found most  
" efficacious ?

11. " Have you employed blood-letting as a remedy for  
" the Fever ; and if so, to what extent have you carried  
" it ; in what number of instances have you practised it ;  
" under what combination of symptoms, and with what  
" effect ? Have you found it beneficial, or otherwise, in  
" the commencement of the disease ? Have you found it  
" beneficial, or otherwise, in the advanced stages of the  
" disease ?

12. " Have you any knowledge of the employment of  
" any domestic remedies easily procurable, as, for ex-  
" ample, the *Centaurea cyanus*, vulgo, " black knobs ?"  
" State the manner of administering such remedies, their  
" *modus operandi*, and, if any, their success ?

13. " Are you of opinion that the disease has arisen  
" from contagion ? Have any observations occurred to  
" you which might illustrate, 1st, The manner in which  
" infection is originated, conveyed, and propagated. 2dly,  
" The term during which the contagion may be supposed  
" to have remained in a latent state. 3dly, The causes  
" which may be supposed to have called it into action so  
" as suddenly to produce fever ? What number of medical  
" persons engaged in attendance upon the sick have died  
" of fever ? Specify their names.

14. " Did the disease extend among the inhabitants of  
" such houses, &c. as admitted of ventilation, and in which  
" due attention was paid to cleanliness ?

15. What measures of Medical Police were adopted for  
" checking the spread of the disease, and under what au-  
" thority ? What was the nature of the accommodation  
" and relief afforded to the sick poor ?"

To both sets of queries the Editors have received numerous replies, which contain a history of the epidemic as it occurred in every county in Ireland, the whole forming a body of information on the subject of their inquiry, of a very full and satisfactory kind.

Unfortunately, however, the decline of the epidemic was confined to certain parts of the kingdom, and more particularly to the province of Ulster. In Dublin, and in the great towns of the South, the disease was unsubdued; it even became more general as the summer advanced, which will appear by the following tables; and it is observable that these tables correspond with returns from Limerick, Waterford, Clonmel, &c. which the Editors have also had an opportunity of examining.

*General Report of Fever Patients admitted into the Dublin Hospitals for three Months, commencing the 1st of June, and ending the 31st of August, 1818, both days inclusive.\**

FEVER HOSPITALS ATTACHED TO THE HOUSE OF INDUSTRY.			STEEVENS'S HOSPITAL.			HOUSE OF RECOVERY, CORK-STREET.		
In hospital 31st May, 1818	514		In Hospital, 31st May, 1818	78		In Hospital, 31st May, 1818	242	
Admissions from 1st June to 31st August	594		Admissions from 1st June to 31st August	836		Admissions from 1st June to 31st August	1983	
June to 31st Aug. } City	4346							
Discharged cured	4013		Discharged cured	818		Discharged cured	1940	
Died	155		Died	18		Died	5225	
In hospital 31st August	4860		In hospital 31st August	78		In Hospital 31st August	5265	
Proportion between the admissions and deaths somewhat below one in twenty-eight.	4860		Proportion between the admissions and deaths somewhat below one in forty-six.	914		Proportion between the admissions and deaths somewhat below one in forty-five.	5265	

**SIR PATRICK DUNN'S HOSPITAL.**

In hospital 31st May, 1818	8	
Admissions from 1st June to 31st August	59	
Discharged cured	87	
Died	101	
In hospital 31st August	7	
Proportion between the admissions and deaths somewhat below one in thirty-four.	101	

**WHITWORTH HOSPITAL, ON THE BANK OF THE ROYAL CANAL, NEAR DRUMCONDRA.**

In hospital 31st May, 1818	10	
Admissions from 1st June to 31st August	119	
Discharged cured	98	
Died	2	
In Hospital 31st August	99	

**RECAPITULATION.**

Total of admissions during three months, ended 31st of August, 1818	7577
Total number of deaths in ditto	535
Mortality below one in 32.	

**GENERAL RECAPITULATION.**

Total of admissions during twelve months, ended 31st of August, 1819	19,855
Total number of deaths in ditto	903
Which gives a proportion of somewhat more than fifty-four admissions daily, and a mortality, on the whole of the admissions, of one in twenty-five.	

\* For the preceding part of this table, see p. 44.

*Return of Admissions, &c. into the Fever Hospitals of Cork, for one year, commencing the 1st of September, 1817, and ending 31st August, 1818, both days inclusive.*

REMARKS.	NAMES OF HOSPITALS.	From 1st September, 1817, to 31st August, 1818.												Total admitted, discharged and died, with what remained in Hospital, 31st August, 1818.
		September,	October,	November,	December,	January, 1818.	February,	March,	April,	May,	June,	July,	August.	
Admitted,	{ House of Recovery, South Asylum—Commenced in December, 1817, Peacock-lane Asylum—Ceased 8th August, 1818,	968-414	405	565	555	555	555	555	555	555	555	555	555	5386
		—	—	199	159	156	165	165	165	165	165	165	165	1471
Discharged cured,	{ House of Recovery, South Asylum, Peacock-lane Asylum,	501-586	553	553	553	553	553	553	553	553	553	553	553	2730
		—	—	—	—	—	—	—	—	—	—	—	—	—
Died,	{ House of Recovery, South Asylum, Peacock-lane Asylum,	553-403	306	555	543	576	590	430	519	565	665	665	665	6274
		—	—	185	159	159	160	192	224	196	573	222	1800	1800
In hospital 31st August, 1818.	{ House of Recovery, South Asylum, Peacock-lane Asylum,*	502-286	953	920	953	917	176	959	960	951	—	—	—	5929
		7-11	9	10	8	19	5	7	11	8	14	9	112	112
		9-10	10	9	6	10	7	5	19	7	5	8	9	71
		—	—	—	—	6	6	7	6	13	13	14	—	101
		—	—	—	—	—	—	—	—	—	—	—	—	139
		—	—	—	—	—	—	—	—	—	—	—	—	114

\* Received no Patients after the 8th of August, 1818.

These tables the Editors owe to the Director General of Military Hospitals, who, by means of the Medical Staff of Ireland, has kept constant watch over a disease which probably would have committed great ravages among the troops, had medical inspection and general discipline been less vigilant and exact. \*

It is scarcely necessary to acquaint those Gentlemen who have favoured the Editors with answers to their queries, that any publication on the subject of the Epidemic would be premature, while it continues in many parts to extend its influence; and at the same time, by combining with dysentery, shows a disposition in some situations to change its character. In the third volume of this work, the Editors hope to present the public with an ample account of the Epidemic, derived from the most unexceptionable sources of information.

The Editors had no means of obtaining the address of many practitioners in the more remote parts of Ireland, and hence their circular letters were sent only to those with whom they were individually acquainted, or whose names were mentioned to them by their friends. The Editors discovered, when too late, that there were many professional gentlemen of great respectability, to whom application had not been made.

These gentlemen are now requested to contribute their assistance, so that the record, which is preparing, may become more complete and valuable. The Editors are still anxious for further information relative to the rise, progress, and decline of the Epidemic. From some reports, in their possession, it would appear that fever existed to a

\* For proofs of the exemption from disease enjoyed by the troops, vide p. 53.

great extent in the country before its unusual prevalence in the towns was remarked. In many parts of Ireland, the most remote from each other, the Epidemic commenced at the same time; and in many of these it also declined at the same time, without there being any similarity in the means adopted for suppressing it: in many places fever appeared to be subdued by vigorous measures of medical Police, while in some it disappeared without an effort on the part of the inhabitants. The Editors are anxious to learn, whether, in any town or district, fever continued to prevail after a sufficiency of employment was obtained by the lower ranks, to enable them to procure the necessaries of life in abundance; and finally, they beg to remind their correspondents, that in the scantiness of information relative to contagion, every authenticated fact relative to the communication, reception, and latent period of fever, is of importance; as are also all facts which might establish the origin of continued fever, independently of communication with the diseased.

Those gentlemen who received letters from the Editors, and who did not reply to them from an apprehension that their answers would not arrive in time for publication in this volume, are again requested to forward their contributions, addressed to the Editors of the Dublin Hospital Reports, &c. under cover, to EDWARD LEES, Esq. Post Office, Dublin.

## EXPLANATION OF PLATE I.

- AA. The pharynx slit open posteriorly.
- BB. The œsophagus slit open posteriorly.
- C. A small transverse portion of the œsophagus, which remains undivided.
- D. The epiglottis.
- EE. The arytenoid cartilages covered on their posterior surface, by the muscles and the mucous membrane of the pharynx.
- F. The cavity of the glottis, almost obliterated.
- GHI. Three distinct morsels of meat fixed in the œsophagus.
- K. A fragment of bone belonging to the first morsel.—It lies obliquely across, and pierces the left side of the œsophagus where it punctured the right subclavian artery.
- L. The right subclavian artery, which arose from the aorta near the termination of its arch, and passed to the right side immediately behind the undivided portion of the œsophagus.
- M. A bristle introduced into the wound of the artery.
- NNNN. The cellular membrane and effused blood.



## EXPLANATION OF PLATE II.

### *Fig. 1.*

- A back view of the fracture described, No. VI. The head of the femur is seen considerably below the level of the trochanter major B. Below, the head is represented as lying almost in contact with that line which runs from the root of the great to the small trochanter C.—The neck of the bone is obviously wanting.

### *Fig. 2.*

Represents a vertical section of the bone Fig. 1.—

The anterior segment is the subject of this figure.

- A. The globular head.
- B. A rugged prominent part of the bone, obviously the remaining extremity of the fractured neck; so that all the bone between the globular head and the base of the neck was removed after the fracture had taken place.
- C. The ligamento-cartilaginous bond of union between the head and the base of the neck;—the reflected portion of the synovial membrane is seen passing over the outer or upper surface of this connecting medium, evidently insulating it from all connection with the capsular ligament. As far as this substance descends between the two pieces of bone, they are held very firmly together; below, the bones being much more loosely connected together by the ligamentous production, D. while the most inferior part of the head has no connection with the other part of the bone.

Fig. 2.



Fig. 3.





*Fig. 3.*

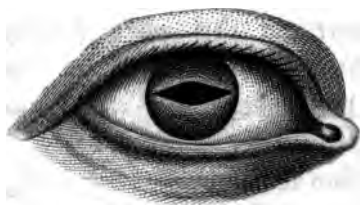
A vertical section of the fracture described No. X.

A. the neck of the femur retaining its natural form, and of the usual length. The lower edge of the neck, near to the fracture, rests upon B, a bony partition interposed between it and the medullary canal of the femur. C is the outer plate of the femur, which seems to be divided near its extremity into two laminæ; from the external of which grows out some of that irregular bony mass, which surrounds the fracture, while the internal lamina is connected with the cancellated structure, which is seen running a little way into the corresponding structure of the neck. F F, the new irregular bony matter thrown about the fracture, in many parts of which the darker spaces had been occupied by a blue cartilaginous substance, now dried up. G, the extremity of the trochanter major.

## EXPLANATION OF PLATE III.

The figures in this plate display the appearance of Mary Bryan's eyes, on whom the operation for closed pupils combined with cataracts, was performed on the 13th of June, 1813. She had been perfectly blind for eight years; her sight was so completely restored by the operation, that with cataract glasses she could thread the finest needle. The right eye in six weeks after the operation, from exposure to cold in a wretched cabin, sustained a violent attack of inflammation of the iris, which impaired its powers considerably; in about twelve months after the operation this poor woman called on me, having been able in the mean time to earn her bread as a dairy maid.

Plate. III.



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Plate. IV.



## EXPLANATION OF PLATE IV.

Is a representation of the eyes of J. Kealy, a pensioner of the 84th regiment, who had lost his sight from Egyptian ophthalmia. The centre of the cornea of both eyes was opaque, and the iris of each eye adhered to its inner surface; the dark appearance of the eyes shews that a good deal of the vitreous humour had been lost; the upper figure exhibits the appearance of both eyes previous to the operation for artificial pupil, which was performed on the 24th June, 1814. The lower figures represent their appearance this day, July 10th, 1818, more than four years after the performance of the operation; this person was so blind that he had required a guide to lead him about for seven years previous to the operation, but he has been, since its performance, able to distinguish every colour and object, and to attend to a variety of business. From the situation of the pupil of the left eye he views all objects with it laterally; with the right eye he can view objects above and opposite; his vision has considerably improved since the operation, and has never since been more perfect than it is this day.

## EXPLANATION OF PLATE V.

### *Fig. 1.*

Represents the appearance of P. Shee's eye, on whom the operation for artificial pupil was performed, on the 14th of July, 1815. He was sent to Kilkenny, and returned home on the seventh day after the operation, able to distinguish his way perfectly well without a guide. The wound in the cornea could not be discerned by the most minute examination in twenty hours after the performance of the operation.

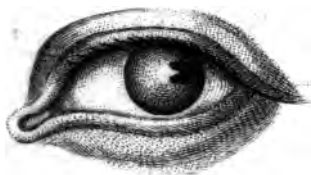
### *Fig. 2.*

Displays the appearance of the eye of T. Mulvany, on whom the operation for artificial pupil was performed, on the 17th of May, 1816; though he could not distinguish his way when he was brought to Kilkenny, he returned home in twelve days after the operation was performed, being able to discriminate every colour and object, and read large print.

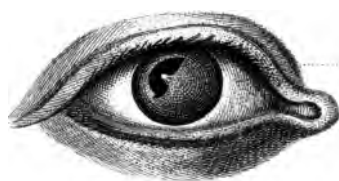
### *Fig. 3.*

Exhibits the appearance of the eye of John Hunt, who had wounded the cornea, with the point of an awl, five years before the drawing was made; a semicircular cicatrix is seen on the nasal side of the cornea, to which the inner border of the iris had adhered, having protruded through the wound. A very small knife was introduced into the

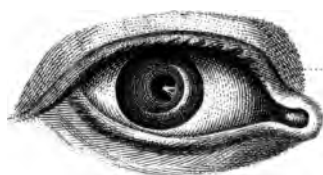
Plate. V.



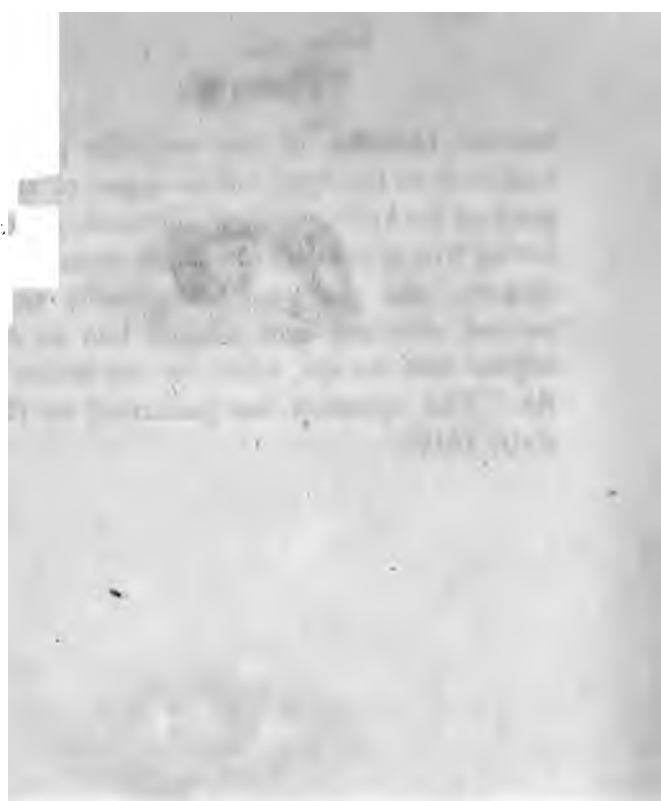
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



anterior chamber of the eye, its point carried cautiously to the upper adherent part of the iris, the point of the knife was then depressed along the adhering iris, which was completely separated from the cicatrix, and the pupil immediately regained its natural situation, and allowed him to distinguish objects with the eye, which he was before unable to do. This operation was performed on the 6th of July, 1816.



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